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FATHER OF EDI ED GUILBERT - FIRED FROM TDCC?

"I'm being terminated with TDCC, but I shall be in the marketplace on January 2nd for bigger and better things in EDI. We're going on with it and up with it."

So **responded Ed Guilbert, President of the TDCC/EDIA,** to a question on his role with the premier EDI organization, the Transportation Data Coordinating Council. Widely recognized as the **Father of EDI**, and for some 19 years head of the TDCC, Mr. Guilbert was apparently asked for his resignation a year ago.

Guilbert was born in Connecticut, educated in Vermont, and received an MBA from George Washington University. He dreamed up the concept of EDI after an Air Force career where he became an expert in transportation and logistics as **Director of Traffic for the Berlin, Korea, Hungaria, and India/China Hump airlifts**. Later he commanded the Defense Traffic Management Service and was Deputy Director of U.S. Air Force Transportation. Criticized for focusing on the basics, Ed has nevertheless been recognized as a leading promoter of EDI and as an **information age evangelist** with a podium manner best described as "rousing."

Asked why EDI's founding visionary was apparently fired, one member of the TDCC staff speculated it was age discrimination, but others felt that poor relations between the association and others might be the underlying cause. There have been disagreements over the appropriate role of the association with regard to ANSI. TDCC is no longer the secretariat for maintaining ANSI X12 standards, but still publishes standards. There were coordination problems with both groups issuing updates under the same version number, but that is changing now that the problem has been identified. Any friction has largely been lubricated as the industry matured. For example, Earl "Buddy" Bass, new president of ANSI X12, enjoys a good relationship with Guilbert.

One knowledgeable source said that for several years Guilbert had been talking about retiring and

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moving to a consulting role. He was given this past year to "get his ducks in a row" for retirement. When the time came for the search committee to make its move, it did. The situation was termed "relatively planned, at least for the past year."

Another said Guilbert's "problem" is one of not wanting to hang it up. "He's a very dynamic guy and it's a tough decision for him. He's the kind of guy that doesn't want to quit."

The definitive word comes from **Richard Steiner** (CSX Transportation), **Chairman of the TDCC Board**, who told INPUT, "Basically the board has been working on a succession plan for the last three years since Ed turned 65. **There was no dissatisfaction whatsoever with Ed's performance.** Basically it was time to make the change to maintain the continuity of the organization." Steiner explained that although Guilbert has done an "outstanding job," the association felt it couldn't afford to have its eggs in one basket and wait until there was a crisis.

Guilbert will undoubtedly resurface in another EDI-related role, possibly with TDCC. A move to another post at TDCC is not precluded by Steiner, who said "He brings a lot to the party."

"**He's the best promoter there is,**" said one network service Vice President. The Vice President said Guilbert's resignation **couldn't have come at a worse time** since awareness of EDI has grown dramatically in the past few years.

EX-ADAPSO HEAD JOINS TDCC: "MORE VISIBILITY"

As EDI has moved beyond the transportation industry, TDCC recognized it should no longer highlight the "Transportation" part of its name and is gradually changing over to Electronic Data Interchange Association. Now the organization moves into a new phase under its second leader: **Jerome L. Dryer**, formerly of the Association of Data and Professional Service Organizations (ADAPSO), **has been named new President and CEO of the TDCC/EDIA**.

Dryer, who joined ADAPSO in 1967 as Chief Staff Officer and Executive Vice President, was named President and CEO in 1979. We caught up with him after a week on the job. Our first question was, "What are your goals for the TDCC?"

JD: One of the things we want to do is be more visible as an organization. When I interviewed for the job, for example, I asked some colleagues in the computer services industry , "What is TDCC?" and everyone shook their heads. I think it's important that TDCC recognize that it's really the Electronic Data Interchange Association, and be more visible to its various publics.

VW: I realize it may be too early to say, but what do you think the role of the organization will be relative to X12, EDI users, and vendors?

JD: Certainly X12 is a very good, very strong organization, as is the overall ANSI group. **We hope to complement and supplement their work** as a repository for all this data dealing with the subject matter. **We're not in competition with them;** that's not our field. People have a misconception about our organization. We're not in the standards-setting arena; that's the furthest thing from our ability, capability , or desire. We are strictly organized to perform services that will aid our members which represent users, to help them gain more productivity and save dollars in their information and how they use it. We're hoping to be that strong repository, a publisher and an educator on the value of EDI. Regarding one of my prime goals, there isn't a total commitment in all industries at the top level for support of this activity. Somehow or other, I intend to reach that top-level executive, as I did with ADAPSO, with what I would call **President's Roundtables** explaining the concept and value of EDI to their organizations. We have done technical seminars, but I want to add this one, an examination of the EDI philosophy and how it will help industry.

TDCC/EDIA 19th FORUM: MORE SOFTWARE, SOME SURPRISES

Nothing was officially said at the TDCC show about Guilbert's departure. Perhaps to trim costs, the usually flamboyant opening extravaganza was toned down. Sure, a contingent of the U.S. Marine Corps Band did its thing, but instead of last year's mind-blowing laser show or the previous year's bagpipers, the "show" consisted largely of

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solo performers. Magician "Dr." Peter Samuelson, alleged star of the Broadway show "Paperwork," showed the audience how to make paper disappear as part of the opening ceremonies. In humor that went over the head of the on-stage victim, Samuelson tossed balls of paper over the victim's head to "disappear."

The forum was like a candy story for the 2000 EDI Addicts, Fanatics, and Skeptics in attendance.

Stuffed animals seemed to be everywhere, with **Telenet's huge TEDI-bear**, announcing its new service, dominating the menagerie. The newest EDI network service signed four customers prior to the show. Ball Corporation, a $1 billion manufacturer and current Telemail user, is the inaugural user.

IBM's booth was twice as large as last year's, with probably twice the number of blue suits waiting in anticipation. The booth's size was a sign of more resources and more attention to the promise of EDI. The exhibit, built on the theme of "bridges" to other third parties and customers, highlighted **Agridata Resources Inc.** (Milwaukee, WI, an agribusiness network service software partnership) and a two-day EDI course from IBM's Systems Integration and Professional Services unit. As one of two keynoters (see below), IBM's Edward Lucente headlined the event

Showing for the first time was IBM rival **Digital Equipment Corporation (DEC)**, talking primarily about its internal EDI use out of the Augusta, GA logistics center. DEC was also demonstrating EDI links to the on-line electronic store. **DEC's participation was seen as a statement of intention to be part of the EDI market**, and the company displayed the wares and personnel of two software companies to prove it: **Birmingham Computer Group** (Birmingham, MI) and **Interchange Systems** Inc. (Lexington MA), a company formed by Ex-Data Architects. ISI software is now being used by most of the banks in GM's paperless invoicing pilot; BCG has previously sold primarily to Detroit and has a marketing agreement with ASK Computer Systems, which uses DEC machines for its turnkey systems. (See next month's issue for an interview with BCG's President.) DEC has been more active with EDI in Europe than in the U.S.; Dec is building intercompany networks and forming a VAN. The company offers some remote computing services in the U.S. through its private network, but its participation will likely be through alliances with network service providers, software firms, and systems houses.

Also showing at the forum was **Prime Computer**, which believes (as does DEC) that high-volume users may dedicate a processor to EDI or, at the very least, host EDI and related applications together.

Perhaps most surprising were the claims by **Union Pacific Technologies** (yes, the railroad) **that it would participate in the broader EDI service market**, and not be content to limit itself to shippers using the railroad. This participaton would bring Union Pacific into competition with the American Railroad Association's for-profit subsidiary Railinc, which uses the Train II network.

Education and training consultants **Carol Baggerly and Associates** showed a new application, the EDI*Business*System, a product that does not translate flat files to EDI, but rather accepts orders and other documents on form fill-in screens that create X12 EDI transactions from the start. The new software is modular, with cross-application access (i.e., order entry to inventory inquiry, and others), and is targeted at companies with limited EDI resources. Also shown by Ms. Baggerly (who staffed her booth the two days wearing sneakers for comfort) was the EDI*Profile*System, a tool for tracking a company's EDI trading partners by maintaining a data base showing who is ready for what, in what format, and in what standard version. Baggerly told us she was pleased that the aerospace community is moving ahead with EDI, largely as a result of her group's efforts.

A new EDI implementation was shown by **American Custom Software** (Cookeville, TN). Called the **EDI Business Partner Network**, the configuration links trading partners into a private network, obviating the need for a third-party service. The company claims that a system with 400 companies would save nearly $500,000 a year compared to using a third party. ACS handles system design, programming, installation, training, and maintenance. According to **Robert Sparkman**, Vice President for Marketing, two systems are now up and running.

Kimba Vasquez, President of **American Business Computer**, and **Anne Evola Hurtubise**, Senior Account Manager, revealed plans to create a proc-

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essing service (called EDI Share) for small suppliers who don't want to bother with their own EDI implementation, but who need EDI to conform to a trading partner's requirements. (This raises the possibility of telex bureaus and store-front business services adding EDI to the FAX, package delivery, and photocopy services they now offer small companies.)

McDonnell Douglas surprised some competitors by giving away EDI service for up to six months if a user becomes a first-time EDI*Net user and installs certified translation software by January 31st. Then service is free through May 31st. According to MDC's **John Reat**, the giveaway is promoting the more than 30 EDI packages approved by MDC's Software Certification Program. INPUT believes these relationships are bringing business to MDC without requiring the network to make a long-term commitment or pay royalties to de-facto "agents."

IBM: "We will compete more vigorously"

Presenting one of two keynote addresses, **Edward Lucente, IBM's Group Vice President, Information Systems**, promised that IBM will compete more vigorously in EDI, and that the relationship between his company and others will be built on a combination of cooperation and competition.

Regarding IBM's use of EDI, he noted that **worldwide, some 37 IBM manufacturing facilities spend $14 billion per year on purchases from 72 thousand suppliers, with over 1 million purchase orders per year**. He said, **"By 1991, using the IBM Information Network, our plants will be going X12 with over 2,000 of our largest suppliers representing 80% of production. Over the next five years, we believe this will save the company some $60 million."**

Lucente outlined four requirements for effective EDI, to which IBM is dedicated:

1) **Connectivity**, including internetworking between rival networks. "Customers don't want to hear about the problems of rival networks. They want to connect data just as readily as they can pick up a telephone."

2) **Effective applications** customized to the needs of various industries. "We intend to imbed translations into existing as well as new applications and will continue to work with customers and third parties on specialized applications." He cited IVANS, the insurance value-added network service, as an example, and indicated that IBM is working with retailers on expanding the universal product code, leading ultimately to a data base of 450 million items described through UPC coding.

3) **EDI enabling**. To assist companies without EDI expertise who are being required to adopt the method, IBM is offering turnkey systems and on-site training. To help managers quantify and justify an EDI investment, IBM has developed a proprietary software package called Information Systems Investment Strategy to analyze a customer's business goals and to show how information systems can make a difference.

4) **Internationalization**. Lucente reported that an international project office is being established at the Tampa Information Network headquarters to develop a uniform architecture for IBM's worldwide networking.

Lucente closed by saying that IBM is committed to integrating EDI solutions, and beyond that, to the broader concept of interorganizational systems. He said more alliances would be formed with organizations having complimentary offerings. **"With EDI, none of us can go it alone.** We need each other as customers and suppliers, while at the same time we compete. We intend to cooperate wholeheartedly and compete vigorously, and if either one overrides the other, we'll let whatever's good for the customer be our guide."

Lots More Software at TDCC/EDIA

Sterling Software's Ordernet Services (Columbus, O.) has formed a new Software Products Unit, with plans for a full line of translators. First out the door is **GENTRAN**, a modular, table-driven package, written specifically for ANSI X12, that has conversion programs for interfacing with internal applications. In addition to X12, GENTRAN handles UCS, WINS, and TDCC standards all at the same time. Under MVS, MVS/XA ,or DOS, GENTRAN operates on HP 3000 and IBM S/38,30XX, and 43XX. Meanwhile, at a separate booth, **Sterling's Systems Software Marketing Division** (Rancho Cordova, CA) was promoting its **TRACS** line of data communications software as an EDI communications package.

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Metro-Mark unveiled its new **Translator MVS mainframe package**, which is fully compatible with the company's mini and micro versions, and which supports all industry-approved message standards and transaction sets at no additional charge. The solution is dubbed EDI Management Software because it incorporates translation and document distribution control in ready-to-run software. According to Vice President **Gene Sedlock**, two days' installation assistance is included in the license, which is $25 K for the first year and $3750 for subsequent years.

EDI Inc.'s Telink has migrated up to the Tandem line, introduced a new catalog for all products plus add-on features, and introduced new communications interface products. The company also **announced an agreement with Telenet** for distribution of EDI Inc. products. Says newly promoted President **Ralph Notto**, "We're also gearing up implementations on other mainframes not introduced here." And for 1988? "I'd like to think [EDI] predictions are correct, and I'll do my best to make them come true," he says.

Alco Industries (Valley Forge, PA) is a manufacturer and — according to **Larry Hall, Manager of Systems Consulting**, the **largest paper distributor** in the country — an agent for the Paper Corporation of America. But now it's selling software. **Alco EDI** was developed after the company looked for, but couldn't find, software meeting the needs of its 175 companies. And then Alco brought Alco EDI to market. Written for IBM mainframes, the $25,000 package ("on special" for $15 K before March, 1988) is a generic translator, not just for paper industry.

Piedmont Systems Incorporated (Winston-Salem, NC), formed earlier in 1987, showed its TEL-EDI (TEL stands for The Electronic Link). Piedmont has six packages in beta test and a commercial release scheduled for the first of the year. The "other" PSI — Program Sciences Inc. — has a spinoff called **Document Interchange Systems Corporation (DISC** — an affiliate of Lloyd Bush and Associates, New York, NY), which showed X-Change PC software it acquired from PSI. DISC was created from the development staff of PSI (Steve West, et al.), which worked on the software that became Control Data's Redinet.

Release Management Systems (Farmington Hills, MI) showed its **RMS-VLT** Variable-Length Translator, among other products. Running on IBM PC-AT or compatibles and Burroughs B25 equipment, the basic package is priced at $2,500. Marketing Director **John Bennett** told us there are over 300 installed, with approximately 100 placed into service during 1987, in both the U.S. and Canada. **Control Data's Dave Pond** indicated that several software distribution agreements were in the wings, with **Supply Tech's** STX12 among them, to expand upon the company's own Redimicro software.

The **APL Group** (Wilton, CT) has a new marketing head (**Bill Fairbairn**) and has renamed its ADCI software **QualEDI**. (ACDI stood for APL Computer-to-Computer Document Interchange.)

To those we missed or haven't mentioned, our apologies. Future issues will describe other software and services, and we'll publish some highlights from the 60 sessions.

INSIDE TRANSNET - AN INDUSTRY ASSOCIATION CLEARINGHOUSE

Developed in 1975, Transnet is one of the first electronic ordering systems, and, with 6,000 users, is the largest EDI system. Originally used by five companies in the **automotive parts aftermarket**, services were later expanded and administration was transferred to the **Motor** and **Equipment Manufacturing Association** (MEMA), an industry trade association.

Although Transnet's development predates ANSI EDI standards, its services are clearly EDI. The association recently introduced **ANSINet** which supports the ANSI X12 format. The system resides on GEIS' network and processing facilities.

Most automotive aftermarket suppliers, 4,000 wholesalers, and 80% of the largest distributors and retailers use the system. Other users are in the industrial, heavy-duty-equipment, and appliance industries. Suppliers pay usage fees based on GEIS' retail pricing, but access is free for buyers. Suppliers can use value-added reports and features to enhance their service to buyers. **In 1986, Transnet processed 50 million line items representing**

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approximately 450,000 monthly orders and this year will hit close to 70 million lines.

William A. Raftery is President of MEMA. INPUT's Vic Wheatman talked with him and **Sheila Corrigan,** Director of Marketing Communications, at the association's Englewood Cliffs (NJ) Headquarters. As the interview reveals, **Raftery has some controversial views about the role of X12 in EDI.**

VW: Can you tell me how Transnet was formed way back in the beginnings of the EDI age?

WR: The idea came out of MEMA's data processing committee, which was developing recommended practices and programs for the industry. Individual members thought the Transnet concept was a good idea and started developing programs individually. As these companies and their data processing executives were starting to look at individual systems, I suspect that since they were noncompetitive, there was an idea exchange about what they could do, and one of them took administrative responsibility.

VW: But eventually the association took over administration?

WR: Yes. The companies realized that **for the good of the industry, both suppliers and customers, it didn't make sense to have a program for just a few.** Since it made commercial sense, competitors would do the same thing and before you know it, there would be a whole series of competitive programs which would not serve their customers' interests. One of the CEOs said the logical place to take this was the manufacturers' association. MEMA has several operating commercial companies and knows how to run a business. This is more than a service; it's a business. So they came to us asking if we had an interest in taking it over. We actually negotiated an acquisition.

VW: What are the advantages of an industry association running this type of EDI clearinghouse, as opposed to a third-party service running it?

WR: **I don't look at it as an industry association running the service.** I think it is somewhat coincidental that it was developed for one industry and is being operated by the industry. **It's a separate company with essentially dedicated staff, and it's not part of the tax-exempt association structure.** I think there's an advantage in that when it started, there was intimate, first-hand knowledge of how the industry's relationships operate. In our case it was wholesale-type customers, direct-buying retail customers, and original-equipment customers.

Everyone involved in Transnet comes out of industry. We're an untypical association. Yes, the businesses we operate are geared to serve one or more industries. Even though Transnet started as the order entry system for the automotive aftermarket industry, we've viewed it as a business providing, first, order entry services, and now EDI and related services to a broad range of industries.

VW: You mentioned other businesses. What are they?

WR: We have several under a holding company: management consulting, credit reporting, collection agency, and an operation that rehabilitates financially distressed companies by avoiding Chapter 11.

VW: You announced ANSInet this past year. **What are the reasons behind migrating to the X12 format versus your industry-specific standards?**

WR: Not versus. We're simply making it available as an additional service. I know a lot of people use X12 and support it, but **my personal opinion is that when you start analyzing X12 as opposed to Transnet, ours is much more efficient.** Last week, we heard a speaker talk about X12 and support the devil out of it. We could have said that if you feel so strongly about it, why don't you use it exactly as X12 is presented because he doesn't. We will make it available because clients want X12, and we're anxious to give them what they want.

VW: What is it about the Transnet format that makes it so special or useful?

WR: It's efficient and less expensive to use.

VW: Less overhead?

WR: There's more in X12 than we need.

VW: Can you characterize acceptance of ANSInet so far?

WR: It's very nominal. We haven't promoted it, and

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it was delayed — we introduced it before we were ready. It's there, and people have not shown a great deal of interest. I think when we get into invoicing and other document transfers, ANSInet will be used a lot more.

VW: Right now, Transnet is used principally for purchase orders?

WR: And the related services that go along with it: exception reports, consolidations, messaging....

VW: You're looking at invoices as the next stage. Any other document types being evaluated or requested?

WR: Long-range we're looking at a womb-to-tomb-type service, from order entry to anything resulting from that — transactions right down to electronic funds transfer.

VW: Sheila, what is Transnet doing regarding software?

SC: **PC Connect was released a couple of months ago. We're distributing the software on a free basis**. Traditionally, the Transnet customer has been working at high speed, operating off minicomputers or higher, and we want to open the PC level. Anyone with a PC can automatically get to Transnet. The only requirement for receiving the software is that they've been validated by a supplier to send orders to that supplier.

VW: Was PC Connect your own creation?

SC: It was written here, 100% customized to Transnet in terms of having complete communications and format compatibility with Transnet.

WR: Suppliers pay for using Transnet, and they're given a free software license, as are the customers. Usage billing is absorbed by the suppliers. That makes us somewhat unique.

VW: There is some usage of EDI transactions in other industries to create a data base for market research, sales, and distribution analysis. Does that capability exist here to track specific sales of products by, for example, region? And is there interest from the membership to do this?

WR: We can do it by customer, by region, by part number, by type. Do we? No. We consider the information private and if participants decide they want it, we could do it. We've run tests with a few manufacturers to see if it's possible. We can combine this with our vehicle registration data base and vehicle identification numbers and have a terrific package.

VW: We estimated your 1986 revenues from uses at up to $1 million. Comments?

WR: We are very, very much larger than that. I would be surprised if anyone in terms of order entry is even close to us. I'm just going to estimate that this year (1987) we'll hit close to 70 million lines. I would hope that next year our growth would be another 20% in terms of unit volume, but not dollar volume because we keep driving the cost down. It's sort of a self-destruct service in that we analyze what suppliers do and what options they're using, and our staff advises them if they think they've reached the point where they can do away with options or change what they're doing. So on one hand we're beating our sales staff over the head to increase sales in both units and dollars, and we're beating our programming and customer service people over the head saying, "Make it efficient, hold down costs, and tell the customer how to use it most efficiently." We're trying to do both things and it makes life interesting at times.

VW: What kind of growth have you experienced this year over last?

WR: I measure Transnet several ways: unit growth, in terms of order entry, how many lines, how many orders, what is the trend. Our ambitions are more unit volume, lower costs, and hopefully higher sales.

VW: You've been at this for ten years, and your growth rate would tend to be slower than someone who just entered. What did you bring in from Transnet services?

WR: That's not public information. What did you think?

VW: Under $1 million in 1986.

WR: You've got to change that radically.

VW: By a factor of ten?

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WR: Just radically, but we're several times that.

VW: Do you think there's a lesson in what Transnet is doing in EDI for other industry associations?

WR: We will make Transnet available to other industry associations. It's not being used just by the automotive industry. Last time I checked, 35 percent of the users had nothing to do with the automotive industry: appliance distributors, electronics distributors, some power companies — it's very diversified. Maybe that's because manufacturers are more and more involved in multiple industries. Segments of automotive sell to a lot of other industries. We're increasingly looking at Transnet as being a generic order entry-system that can be used by multiple industries. In our own quiet way we think we are a major, maybe the major player in this particular order entry market.

ESSAY: EDI AND E-MAIL INTEGRATION

EDI and E-Mail are application cousins. Just as the postal service delivers messages and documents, E-mail does the same but it is being used for functions that may be more economically handled through EDI. Even though EDI and E-mail are related, there are some fundamental differences.

First, some definitions:

EDI is computer-to-computer communications, but the emerging definition is application-to-application, implying a close integration of applications and EDI. Most people consider EDI as intercompany, although the technique can be used within a company or between corporate divisions.

Implicit in the definition is that EDI overcomes incompatibilities (in protocols, codes, speeds, equipment, time zones, and data formats) through the use of standards.

EDI traffic is machine readable, typically representing business documents such as purchase orders and invoices. However, EDI also is being used in health care insurance (called Electronic Medical Claims (EMC) or Electronic Claims Submissions (ECS), and in several other applications. We'll be looking at some of these "other" EDI areas in future issues and in our market research reports.

EDI does not refer to Automated Teller Machine or Point-of-Sale applications. It can be argued that when you make an electronic withdrawal or pay for groceries with a credit card, you're filling in an electronic form. However, in these cases communications are device-to-computer and not computer-to-computer.

Finally, EDI is not electronic mail because E-mail is people-to-people messaging whereas EDI is machine-to-machine and ideally application-to-application.

Connecting the Not Ready for EDI Players

EDI is being integrated with E-mail. Given the early stage of acceptance, it's likely that a company may want to communicate with another that is not ready for EDI. To avoid maintaining a parallel system — one electronic and the other paper — for purchase orders, invoices, and other documents, companies can use mixed-mode E-mail — that is, create a hardcopy document through an E-mail service. Because EDI data is machine readable, this means converting the transaction to ASCII prior to printing, and structuring the information in a human-readable form.

Most of the third-party providers have this capability. GEIS' EDI*Express messages can be sent through its Quick-Com E-mail service. Telenet will tie Telemail to TEDI. Sterling Software's Ordernet developed EDI/LaserMail with the First National Bank of Chicago. The original service worked in duplex: through manual rekeying, paper documents were converted to electronic versions. First Chicago is now out of the picture, and so is the data entry service. Users' EDI documents are laser printed by Ordernet, and mailed to trading partners from the Columbus, Ohio data center. Ordernet is also testing a facsimile delivery option. Western Union plans to deliver converted EDI transactions to FAX machines and will presumedly integrate EDI messaging with the other varieties of their Easylink E-mail service.

Opportunity Calling

As noted, E-mail is being used for EDI functionality. Many, if not most, of the third-party services have a

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forms fill-in capability where a user stores a template representing an often-used document. **There is an opportunity here for services that do not yet offer EDI. These services would convert E-mail to EDI data, from a not-ready-for-EDI player to its trading partners that may require electronic trading.** The forms-fill-in situation has been called "poor man's EDI" but by completing the loop, EDI will become more valuable and available to users, particularly smaller companies just getting started in the technique.

UCS WINS WINS AND VICS

The Uniform Code Council, the folks that brought you bar-coding on your groceries and UCS standards to your grocery EDI, has become **administrator and secretariat** to the Warehouse Information Network Standard (WINS) folks, and to the Voluntary Interindustry Communications Standards (VICS) group which is developing EDI standards based on X12 for the apparel and general merchandise supply and retail industries.

According to **Paul Benchener** (Levi Strauss), **Chairman of VICS,** "UCC's coordination of both the VICS and UCS standards will allow them to evolve along a more common path."

There have been suggestions that UCS and X12 would, at some point, merge (see EDI Reporter July, 1987), but some UCS members have voiced the opinion that "if it ain't broke, don't fix it." Marsh Blackburn, Chairman of the UCS Advisory Committee addressed the issue saying, "Although there are no current plans to merge, we believe this common focal point will allow us to do a better job of supporting EDI among retailers and suppliers."

INPUT'S 1988 RESEARCH PLANS

In addition to the monthly you're reading now, INPUT issues full-length market and implementation reports as part of its EDI Planning Service (EDIPS). Reports issued so far for the 1987 program have covered the **EDI Services Market, Service Provider Profiles, The X12 Software Market, Software Vendor's Profiles, EDI in Western Europe.** In the queue for release shortly are **EDI Initiatives in the Federal Market, International EDI Services,** and **EDI Implementation Case Studies.**

The service continues in 1988 with the following studies:

EDI Service Analysis 1988-1993 examines trends in the strategies and past performance of continuing EDI services, and the intentions and prospects of new entrants. Alliances, enhanced services directions, and how users' needs are being met are discussed. Segmented service forecasts will provide projections on user expenditures for the various components of EDI.

EDI Service Provider Profiles — Update reports on all present and several potential providers. The report breaks down1987 market shares by revenues and numbers of customers, describes their competitive positions, and reports their EDI successes and failures.

EDI Software Product Analysis 1988-1993 evaluates the directions and prospects of EDI software providers. User needs, market alliances, and directions toward integration with financial, manufacturing, inventory, and transportation management software are discussed.

EDI Software Product Provider Profiles describes the functionality of specific EDI products including those supporting purchasing/logistics, insurance, and other applications. Market share information based on revenues and numbers of customers, competitive positions and wins and losses are reported.

Vertical Market EDI Potentials and Directions discusses EDI usage in approximately 30 vertical industries and identifies major users and industry-specific issues. Vertical-market user expenditures are broken out for "mainline" (i.e. purchasing/logistics) EDI, health, property and casualty insurance implementations, and other forms of EDI. Opportunities are also presented.

Value-Added Data Services — European Market Directions, produced by INPUT, Ltd. (London) examines growth opportunity for VADS and application services, focusing on EDI, EFT, and POS. Key issues affecting vendors and users are discussed, with an update on the European telecommunications environment. Market sizes and forecasts are provided as are recommendations for existing and future participants.

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X.400 Products and Services describes the nature of this emerging international messaging standard; its relationship to electronic mail, voice, and video communications; and its implications for EDI. Directions toward universal messaging through internetworking are discussed, as are services and software supporting the standard.

EDI and Professional Services examines software customization, systems integration, education/training, and facilities management in relationship to EDI implementations. Vendor offerings are described, opportunities identified, and recommendations to users and providers are offered.

Additionally, INPUT will host its **Second Annual Joint User/Vendor EDI Conference**, scheduled for July 28-29, 1988 at San Francisco's Mark Hopkins Hotel; and subscribers may also attend our **Joint Client Conference** for an overview of trends and issues in information services.

Although all studies are available individually, subscribers to the full EDI Planning Service attend the conferences at no additional charge, and may access INPUT's analysts worldwide for rapid **"hotline"** responses about published reports, industry rumors, and competitive information such as pricing, industry focus, product definitions, alliances, and joint ventures. Subscribers can also use INPUT's **Information Center** for research projects, and **Customized research and consulting services** are available to evaluate business plans, analyze joint-venture opportunities, and help draft RFPs for EDI implementation projects.

For more information about EDIPS, contact any INPUT office listed on the back cover.

News Bits

Martin Weiss — formerly Product Manager, Electronic Order Exchange with AT&T — has joined **Western Union** as **Executive Product Line Manager for EDI Services**. Marty will direct all aspects of product development and marketing, including developing distribution channels, EDI software relationships, and marketing to dealers and certified resellers. He worked seven years at AT&T, which remains the only network to date to promote the idea of EDI in general advertising. However, AT&T calls it Electronic Order Exchange (EOE), which encompasses on-line order entry, telemarketing, and other variations on the theme as well as EDI.

The **General Services Administration has selected Martin Marietta as prime contractor on its EDI effort**, with regulations regarding standards and procedures to follow. Competitors for the business characterized the MMDS's bid as "extremely low." EDI initiatives in the Federal government is the subject of an INPUT report nearing completion.

GEIS' EDI*T mini and mainframe translation software is now in Version 2.3, and Version 3.0 will be beta tested over the next few months, with commercial availability scheduled for April. About 100 copies have been sold. Version 3.0 will include the **EDIFACT** international standard syntax and will support corporate clearinghouses with a feature called EDI*Central to help a company control its EDI gateways from centralized locations while allowing application integration.

Supply Tech (Southfield, MI) reports an installed base of 700 U.S. and Canadian users, and that **Control Data Corporation will be reselling its STX12 software**. STX12, now in **Release 2.1, can handle CAD transactions** using X12 at speeds of 14-18 KB over standard dial-up lines.

International News Bits

GE Information Services and the Swedish consulting and software house **Transtema** have an agreement to integrate Transtema's systems and services with the GEIS network. The target markets are in shipping lines, ship management, agents and freight forwarders. Transtema will resell Trade*Express and Quik-Comm E-mail in combination with its Tradeware and Shipmaster packages.

A report out of London indicates that **GEIS** and **Management Sciences of America (MSA)** are expanding their joint marketing efforts to international trading partners.

A new document, **A Review of the Development of EDI in the UK** (released by the consultancy Euromatica at a European EDI conference), has found that between 60-70% of all European EDI activity is in the UK, and that approximately 5,000 companies

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will be active by 1990. The report states that at the end of 1985, the UK was about two years behind the US, but the gap has been bridged when comparing EDI use and the size of the general population. **Growth in the UK has been attributed to a government-sponsored awareness program called Vanguard**, and a second program, Vanguard 2, has been announced. Phase 2 will focus on identifying additional industry groups that can benefit from EDI to help the UK remain competitive in world markets.

IBM has formed an EDI Users Group in Europe to address implementation and application issues, and has been holding meetings with prospects and participants. All IBM European plants will be linked for EDI this year, and IBM has announced support for the EDIFACT standard.

The Computer Law Institute of the Free University of Amsterdam is doing a study commissioned by the European Commission on **legal obstructions in the replacement of paper import/export documents by EDI**. The study will focus on authentication, evidence, access to, and audit of electronic documents. Those with insights to offer are invited to contact Mr. H. Schutte, Computer Law Institute, Vrije Universiteit, Faculty of Law, P.O. Box 7161 1007 MC, Amsterdam, the Netherlands. FAX: (020) 428998, Telex: 11329.

EDI Events

February 2, Clift Hotel, San Francisco, What's New in Facilitating International Trade, sponsored by the National Council on International Trade Documentation and Marine Exchange of the San Francisco Bay Region. (212) 925-1400.

February 11-12, Brussels, EDI — The Customs Connection, Sponsored by the Customs Cooperation Council.

February 22-26, Harvey House, Dallas, TX. ANSI X12 Committee, hosted by IBM. (703) 548-7005.

February 25-26, Hyatt Arlington, Arlington, VA. TDCC Training Program. (202) 293-5524.

February 29-March 2, Netherlands Congress Centre, The Hague, Compat '88, the Third International EDI Conference. Eurotech Forum, Brussels. (32-2) 736-9715.

March 3, Hollywood Beach, FL. EDI and X.400, sponsored by the Electronic Mail Association. (202) 293-7808.

March 15, New Orleans Hilton, Seminar on EDI in the Healthcare Industry, sponsored by the Federation of American Hospitals, Health Industry Manufacturers' and Distributors' Associations. (501) 661-9555.

March 31-April 1, Hyatt Arlington, Arlington, VA. TDCC Training Program. (202) 293-5524.

April 11-15, Washington, DC. Combined UNJEDI Meeting, hosted by the Department of Transportation.

April 13-15, University of Wisconsin-Madison Management Institute, Paperless Purchasing. (608) 262-7357.

April 20-21, Hyatt Regency, San Francisco, CA. ANSI X12 EDI '88 Seminar — Changing the Way Business is Done, sponsored by the Data Interchange Standards Association. (703) 548-7005.

May 2-3, 1988, Netherlands Congress Centre, The Hague, EDI In Practice, sponsored by The City of The Hague, CETIMA, and Elsevier Science Publishers. (+31) 10-436-0371

May 2-3, LeGrand Hotel, Montreal, EDI Council of Canada User Group Committee meeting. (416) 621-7160.

May 16-20, 1988, Chicago, IL. ANSI X12 Committee, hosted by Moore Business Forms. (703) 548-7005.

June 1-3, New York Hilton Hotel, International Trade and Computerization Exhibition, sponsored by the National Council on International Trade Documentation. (212) 925-1400.

June 15-17, University of Wisconsin-Madison Management Institute, How to Manage Traffic the EDI Paperless Way. (608) 262-4856.

July 28-29, Mark Hopkins Hotel, San Francisco. REVISED date and place for INPUT's 1988 EDI Conference.

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Streamlining Consensus/International Issues: X12 In Dallas

If you calculate the investment made by companies in the EDI standards-making process, you come up with a pretty healthy figure.

At the last ANSI X12 meeting, some **437 attendees, representing 227 companies,** were registered — a **new record.** Let's assume that 37 of the registered delegates were "no shows" and that those present attended to ANSI business for, on average, 2 days during the week-long event. Now, for argument's sake, let's assume these technical and management people earn on average $50,000 a year, making their per-diem value approximately $200. Let's add to the calculation travel expenses for 400 people averaging (conservatively) $600 per person. Let's add prorated dues for the companies represented at the last meeting at approximately $100 each.

Push the "calculate" button on the spreadsheet and you come up with a $440,000 grand total for each quarterly ANSI X12 meeting. Some committees get together in between regular meetings. The net result: **companies are investing at least $2 million yearly in developing and maintaining the ANSI X12 standards.**

Is It Worth It?

Let's examine the results and events of the last meeting to see if we can arrive at any conclusions.

A Contribution to Society

In Dallas, **Earl ("Buddy") Bass (EDI, Inc.),** as newly elected **Chairman of ANSI X12,** gave a belated acceptance speech, describing his organizational philosophy and his goals for the group. He said **X12 must make a contribution to society** through the creation and maintenance of standards used by all industries. Bass suggested that X12 members represent their industries and not simply their companies, saying, "Even if you think your company's way is best, come to each decision mark, stop, look, and listen. Then compromise to get the best solution for your whole industry." He continued, saying, "You're all good and you all deserve to be

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heard. Remember that **consensus and compromise are perhaps the best ways toward accepting a standard."**

Bass also outlined plans for improved group functioning, including streamlined procedural steps. The result will be fewer committees, but each with **two work groups**: one for **North American EDI** and one for **international standards**. Bass said this approach "would allow for a natural migration to EDIFACT since each work group would be familiar with the attributes of the other." ANSI X12 plans to move from developing purely American standards to convergence with the evolving international standards.

Bass also hoped that the often-proposed idea of bringing all North American EDI standards under the ANSI X12 banner could be accomplished soon.

Ken Hutcheson (DuPont), Vice Chair of the group, noted that the official ANSI standards have been published [Editor's note: they are available from **Global Engineering Documents** 800-854-7179]. He warned against using other published documentation for implementing X12 because the data bases are maintained differently. "The X12 user should be using this official ANSI publication and nothing else," he said, reporting that the next update will be available this summer.

Network Interconnection Work "Dormant"

Dave Torma (3M), chair of the communications subcommittee, reported that a task group looking at network interconnection standards has been dormant for some time. While there is interest from users who want something to happen, Torma says that "it's only going to work if we have customers contributing and providing information about their requirements."

While some feel interconnection work is something vendors should address, this apparently will not happen because of antitrust concerns and competitive issues. Torma also reported that another task group is looking at the **X.400 electronic messaging standard** to determine how it can be used for EDI. The effort this time was limited to examining differences between the 1984 and 1988 proposed standards. Meanwhile, another task group comparing EDIFACT and X12 has completed its review of the syntax differences. The next step is a comparative look at the envelope structure.

Much Attention to International EDI

International EDI development activities are in progress within several ANSI groups. **Dennis McGinnis (North American Phillips)**, head of the **International Project Team**, reported that a voting ballot and information package on the proposed migration plan from X12 to EDIFACT is being mailed to members.

There have been concerns regarding the speed with which this migration plan was being promoted; some people felt "railroaded" and worried about the costs involved, and others questioned how additional development work will impact domestic standards. There were also concerns about what changes will be needed in currently installed EDI software. Another issue is the confusion factor, with users not knowing which way to go, thus impeding adoption of EDI.

Those leading in international standards development held informational forums to address these concerns. **Jeff Sturrock (Texas Instruments)**, Public Relations Chair for the **North American International EDI User's Group**, said international activities are critical, noting that most domestic companies contribute to the international business market either through supplier or customer relationships. He said, "All of us must be positioned so we are prepared for these [international] requirements and can act quickly to maintain the competitive edge." Sturrock said the migration plan **"is our opportunity to develop standards which will have a minimal impact on our current EDI implementations and at the same time address business needs."** He felt that combining domestic and international EDI standards development made good sense to protect the investment already made and to gain economies.

In response to questions, McGinnis said he felt the X12 organization will grow in size and scope due to its international effort. While some multinational corporations are represented in ANSI, others are not and members of the import/export community have yet to participate in the ANSI standards process. However, once these entities recognize X12 as the appropriate forum, they will join, according to McGinnis.

When asked **how long there would be two standards** — North American and EDIFACT — McGinnis said that the market would determine that, and that in fact many companies are now supporting multiple standards (such as UCS and X12) because of trading partner requirements.

McGinnis had worked to get the **US Customs Service** to adopt EDIFACT and told us he felt the

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agency's involvement was very significant. "Customs has committed themselves to putting EDIFACT out in pilots over the next five to six months," he said. "They see EDI is taking off on a worldwide scale and they need to play a part in it." Others we talked with about Customs expressed concern over the agency's ability to get its current systems, including modules of the Automated Commercial System, up and running, and they questioned whether the EDIFACT pilots would be done on a timely basis.

The Case of the Hard Disk Hard Copy Original

Carole Baggerly, reporting for the Government Project Team, described some of the **legal questions** relative to **government/commercial community transactions.** Apparently, the rules do not yet allow for electronic trading, and political pressure is needed to bring changes in federal acquisition regulations to specifically allow EDI. Baggerly reported on one court case, which determined that since data for a transaction was originally placed on a hard disk and not on the archive copy, **the hard disk was deemed to be the original.** There are several other ongoing court cases that, when resolved, should lead to less-restricted government EDI implementations, according to Baggerly.

Sounds like E-Mail to Me

A new **text transaction set** is being developed that, according to **Phil Miller (Texas Instruments),** will translate internal Electronic mail messages into X12, attach them to an EDI transaction for transmission to a trading partner, and retranslate them into the receiving parties' internal E-mail standards. The idea is that E-mail is often used in conjunction with trading (particularly for negotiations and clarification) and therefore should be merged into X12 capability. [Side Note: Electronic mail executives at an E-mail seminar a week later scratched their heads over the need for this transaction, saying software and third-party networks can handle this function now.]

Government Agencies "Come Together"

Roy Saltman of the **National Bureau of Standards** spoke as X12's liaison with the ANSI X3 group that deals with a wide range of information system standards. He asked the X12 group to use the liaison, particularly to adopt existing application-independent standards, rather than to develop new ones. He cited the Defense Department's CALS (Computer-Aided Logistics System) project as an example. CALS will use graphics and provide a useful experience for the integration of graphics with X12 transactions, something that is being discussed within X12.

Saltman said that as a branch of the Department of Commerce, NBS "has a special mission to improve the effectiveness and efficiency of government operations with new applications of computers." Accordingly, he announced that NBS, the Institute for Computer Sciences and Technology, and the Federal Data Management Users Group are sponsoring a May 26 conference at the NBS headquarters in Gaithersburg, MD. Called **"EDI: Bringing It Together in Government,"** the event will present industry and agency views on how government wide savings can be obtained through EDI. [Information is available from the NBS at (301) 975-2826.]

Saltman said, "We want to bring together different government agencies so they all know what each is doing," and also to promote X12 with the goal of getting government agencies to adopt the standard as their own.

Ford Says: Do It or Be Desourced

Jim Oravec (EDS), representing the **Automotive Industry Action Group,** reported that **Ford Motor Company has told its suppliers to become EDI-capable and to use bar codes to drive electronic trading by 1989,** saying essentially "we expect you to scan." The penalty for those not conforming will be **"desourcing"** in favor of suppliers who do. GM tried this tactic with mixed results, and although there is no corporate policy to "desource," other sources within EDS told us some divisions have done just that when they can find an EDI-capable alternative.

Metals, Trucking, Telcos, Aerospace Developments

Don Spiegel of Alcoa, representing the **Joint Metals Committee,** reported that the Metal Distributors Association has formed an EDI group, and that a test results transaction is being added to the standards.

American Trucking Association representative **Greg Cizek** reported that a list of EDI-capable transportation carriers has been published and is available to shippers.

Linda Newerla (Belcore), reported that the Telecommunications Industry Forum (TCIF) has published guidelines for use by companies working with telecom products, and said that work is proceeding to standardize product code identifications. She also told us that the group

Continued on page 4

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Public/Private Joint Venture for Canadian Trade EDI

The Vancouver (Canada)-based Asian/Pacific Foundation has proposed creation of the Canadian Standard Interchange Facility (CANSIF) for international EDI services.

"It's a project to create an international EDI system, part of a national system within Canada," says Marcel Mercier, a foundation Vice President. "The project will be a private, member-owned, nonprofit system developed with a national approach, supporting multimodal transportation, and addressing the needs of the Pacific Region."

A center in Vancouver would provide the main linkages west, and one will eventually be established in Montreal for the East Coast trade community.

The Asian/Pacific Foundation acts as a neutral body to bring together the public and private sector on shared interests, and to work on projects addressing and strengthening Canada's economic relationships with Pacific Rim nations.

Says Mr. Mercier, **"We're now obtaining the commitment of organizations as major sponsors of CANSIF.** That means they make a financial contribution, and assume ongoing responsibility for its management." **Major transportation companies and port authorities would be sponsors.** After a sufficient number of private companies come on board, Federal and provincial government sponsorship would be pursued. This is expected to happen within next few months. "It's a joint development project between the government and private sector," according to Mercier.

As now envisioned, **CANSIF would be a purely communications, rather than data processing service,** with translation handled by user software. It would not require users to change their own systems. The concept was formulated a year ago, and has been endorsed by members of the International Air Transportation Association, with the maritime business community considering involvement.

According Mercier, the system will build on Canada's unique telecommunications organizational structure, but it's too soon to tell what network facility will actually be used.

Mr. Mercier notes that the Foundation has been monitoring EDI activities throughout the Pacific Rim. **"We envisage that this system would interface with the major Pacific Rim port cities.** We will be using international standards, such as the messaging standards that exist for the air transport community **(IATA)."** CANSIF will also likely adopt **EDIFACT** and probably the **X.400** message-handling system. Mr. Mercier believes that X.400 will be important to the project, saying , "It will allow communications between various computers, and we're looking to make this thing accessible to very small as well as larger firms. I believe it will be a key element, particularly for microcomputers." ■

X-12 in Dallas. . . *from page 3*

will be working on a way to send **electronic telephone bills in EDI formats.** TCIF will be holding a Technical Exhibit and Seminar in September, with details to be announced.

Ray Day (LTV) of the **Aerospace Industry Association** reported that a meeting has been held with the Air Transportation Association to compare **Specification 2000** formats and X12 to resolve variances so that companies involved in **aircraft maintenance** won't need to manage dual standards. Specification 2000 has been around since the 1950s (then called Specification 200) when key-punched cards were used for ordering and inventory tracking.

Comments: Now, to answer the question at the top of this piece: **Is this standards-making activity worth an industry investment of minimally $2 million a year?** There seems to be a lot of activity in virtually every industry group. Given that standards need to be accepted by a broad range of users; and given that the consensus process can be protracted while the time delays and political niceties may appear infuriating, confusing, and wasteful; we believe the process is necessary. In a word, yes, it's worth it. ■

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What They Teach at Harvard About EDI

Prof. Benn Konsynski is a professor at the University of Arizona in Tucson, in the Department of Management Information Systems in the business school. He received his Ph.D. in Computer Science from Purdue, and is currently a Visiting Professor on a multiyear appointment at the Harvard Business School.

Dr. Konsynski, along with Dr. James Cash, is credited with coining the phrase "Interorganization System" or IOS, and has written several seminal articles on the subject. In the seventies, Dr. Konsynski consulted on early stages of AT&T's Advanced Communication Service (which later became Net 1000), as well as other areas of computing and communications in business practice. It was during this mid seventies period that he became interested in the **strategic and business impacts of organization interconnection**. While his academic interests are varied, he has a special focus on VANs and their impact on organizational strategy and structure, as both a technical and a business phenomenon.

We visited the hallowed halls of Harvard one crisp winter's day to talk with Dr. Konsynski on HBS' interest in EDI, and to get an academic perspective on the application's effects on American business.

VW: Why does HBS teach about EDI?

BK: We're very interested in issues critical to general managers. Among those are the impacts of information technologies and their emerging role in organizational strategies; in influencing effectiveness, productivity, and efficiency; as well as in contributing to competitive postures.

VW: The HBS method of teaching is the case study. How are cases developed?

BK: By professors and research associates. There's no distinction or demarcation. The cases are available through our case services organization and they're used by many business colleges as well as for corporate education and management training. [Editors Note: The Harvard Business School Publishing Division's address is Boston, MA 02163, phone (617) 495-6117.]

Getting Down to Cases

VW: Can you tell me a little about some of the case studies available?

BK: The **Gillette** case illustrates multiple issues in EDI policy formulation. The one on **Aetna** looks at the GEMINI system, which interconnects their agents. Another on the **Insurance Value-Added Network Service** examines the emergence of market platforms like IVANS, as does the one on **Transnet**.

The cases examine the development of these network services as they emerged from professional industry organizations. In some of the cases, we look at standards adoption. For example, Transnet has a significant history of proprietary standards and the case describes how they're dealing with the successful emergence of X.12.

VW: According to our interview with Transnet a few months ago (*EDI Reporter* January, 1988), X12 was not being accepted by the network's users. Do you have any perspective on that?

BK: Transnet is really an interesting phenomenon. It's one of the oldest of its kind. I first heard about it in 1980 before the idea of cross-industry standards was being seriously discussed in the ANSI arena. Transnet had a successful evolution. They've had to deal with an emerging standard and I think they're reconciled to managing a transition in the long run.

VW: Apparently X12 will migrate or converge with the international EDIFACT standard. **Do you see the other EDI standards, like UCS (grocery), coming together in the future?**

BK: **I think its inevitable that the standards will converge to a much smaller** set and that X12 has to embrace and reconcile with UCS. Certainly international formats will be successful. However, I don't think that we have to have a single standard. I hope that in our rush we don't lose sight of the benefits and need for variances within particular industrial and business communities. I see some paring out, some homogenization, but I don't think there will be one single satisfactory standard across all industries.

VW: Can you give me an example of standards variances for particular industries?

BK: Market platforms (like IVANS or Transnet), which are third-party brokers facilitating interbusiness interchanges and even negotiation across multiple companies. Here special standards may be needed. I don't know that we have to quest for a single standard or whether these can all come under something like X12 or even X.400 as an envelope standard.

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VW: Some users might take the position that while the standards may be moving toward each other, until they settle down, I'm not going to get involved in EDI. Do you think that's an appropriate response? **Should users hold back?**

BK: EDI is a business decision, not a standards decision. Having made that decision, the technology and standards decisions need to come. They are operationally necessary. They're going to be driven by individual and industry needs for either de-facto or de-jour standards initiated by market leaders, regulatory agencies, collaborative groups, or industry associations.

I'm concerned if one starts talking about the EDI decision being based on standards adoption, but the mistakes I've seen have not been regarding standards. **It's tougher to make standards mistakes today than it was three years ago** because it's a much clearer picture. For the most part, having the house in order, the back-end operations, the block-and-tackle systems, is often more critical to the EDI business decision than a bad decision on standards.

VW: Have any **common themes** emerged in the case studies you and your colleagues have developed?

BK: One of the interesting trends is that organizations need to recognize they have to deal with a broad portfolio of interorganizational linkages. They need to recognize they cannot treat links on an individual basis. They have to establish **organizational policies** for electronic interchange, and not deal with them strictly one at a time. Nor can they deal with the policies strictly at a functional level. Marketing has to deal with manufacturing, which has to deal with...it's an organizational, not a departmental, decision.

When one department has been the sole entity initiating interconnections—whether it's marketing, manufacturing, supply, or finance—that department tends to develop biases and ignore the other aspects that come into play. You're dealing with much more than the exchange of formal documents. You're dealing with managing and changing the nature of relationships across the company.

For example, if a sales person was the interface to take orders, the order management process is also a sales opportunity, and an opportunity to manage the relationship and possibly to enhance it. By dealing with it strictly as order entry, you've negated sales opportunities and changed the whole nature of the relationship. I believe it's absolutely critical to look at it beyond the electronic data interconnection and see it as an interorganizational system involving people as well as EDI relationships.

Another trend is the emergence of the third-party brokerage functions and electronic market platforms we talked about where a single organization facilitates business transactions within a market, or serves to broker and connect organizations in need of products and services with organizations offering them. Initially they might simply grow out of a distribution channel or a professional organization which manages, monitors, and influences industry practices. They may even grow out of a regulatory agency, setting up standards for market transactions. They may grow out of the market leader who establishes the transaction formats within an industry such as the airline industry. This third-party platform can originate in a variety of ways.

Another phenomenon is the emergence of **bypass situations**: a distribution channel is faced with situations where the EDI link creates bypass opportunities. **Some distribution channels are losing out big as electronic links bypass the traditional lines of service.**

VW: Is there any way those being bypassed can add value so they won't be threatened as much by these electronic linkages?

BK: In some cases we've seen the intermediary become the dominant force in the transaction, thus preventing bypass. In other cases we've seen large organizations bypassing their traditional distribution channels by direct client linkages.

Look at travel agencies where services that gave order to their transactions also educated a populace and created a background of service that offered an opportunity for customers to bypass agencies. Customers were more educated and better able to select their product; product information is much more readily available. A variety of things came together to create a bypass opportunity. That's not 100%, and it's a trend that could be stayed by other factors, but we certainly see that happening.

I was talking recently with a large west-coast appliance distributor. He recognizes that manufacturers could create a bypass situation, based on the nature of actions taking place within their industry. He recognized the threat early and is positioning to meet it and seize it as an opportunity to bolster his role in the marketing process through several means (including information technologies) to enhance his services and lock himself in with his clients, creating a golden thread across his client organization,

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making it very hard for them to switch or bypass.

Does EDI Cause Unemployment?

VW: It seems as though there's potentially a social cost in EDI. For example, do you think it leads to unemployment?

BK: I suspect that growth in product and service opportunities will more than compensate for any displacement. **I really don't believe we'll experience an excessive amount of unemployment other than through attrition due to the efficiencies introduced by EDI in the near term.** It is clear that the skill mix is changing in organizations. That will have a higher impact on individual roles and responsibilities than job displacement.

The problem is we're not making decisions on a social basis. I wrote a paper in 1982 promoting the need for a business and social examination of the impacts of interorganizational systems and to examine the need to articulate policies on interorganizational linkages, recognizing that the influence on business and industry structure is going to be great.

We're starting to cloud the notion of organizational boundaries. What's the legal boundary where one organization ends and another begins? I don't think we can continue to carry forward the assumptions about industry and business structure that we have held in the past. Let's look at the linkages of a large manufacturer to suppliers, initially requesting links to manufacturing, inventory, and manufacturing schedules. Then they start asking for quality control and other forms of information needed to manage the relationship. **At some point, we've created inextricable links, a whole new relationship quite different from what we've had in the past.** Now we're linking into their information systems and they're virtually part of our own. I think that creates new concerns from a social and business practices standpoint. I don't believe there are only threats. It's exciting and offers great opportunities.

While I'm excited about new organizational and industry structures, I don't think decisions are being made by the right people. I believe emphatically that quite often they're made based on technical or single-departmental values. The net effects are not well explored, and therefore business and relationship management impacts are not really assessed. **The wrong people are making critical policy decisions.**

VW: And who are the right people?

BK: The right people are much more interfunctional, probably much higher in the organization. Top-level management needs to participate in these critical decisions regarding interorganizational relationships. But they have not been alerted to these concerns. I believe it's one of our missions to educate general management to the opportunities, threats, and the potential impacts of information technologies on their management styles, organizational identities, philosophies, and the strategies the organization wants to pursue.

VW: Who else is teaching about EDI? Is there a network where you're exchanging information and developing a "cabal" of EDI-aware, up-and-coming MBAs?

BK: The EDI phenomenon is recognized within our school in a variety of areas. People in marketing research are looking at it from a consumer and industrial marketing perspective. In the POM (Production Operations Management) area, they're looking at industrial buyer/supply relationships. There's also interest in strategy, organizational design, and general management where several faculty are looking at networked organizations and the successor to that, the network organizations themselves.

Human resource management people are looking at these quasi- and hybrid organizational structures, and what it does to people management, a very critical problem that's often neglected. I observed many years ago a phenomenon where employees felt more loyalty to, and were more willing to exchange information within, the interorganizational system of different companies than to the parent company.

VW: Kind of a functional allegiance?

BK: Exactly. **Their loyalty shifted to the system.** It creates these quasi-organizational, hybrid structures. That's why I say we're getting very fuzzy on the notion of organizational boundaries from technical, information sharing, revenue, power, and influence standpoints, and from human resource perspectives.

There's awareness in several areas at Harvard that new phenomena are happening and they're worth studying for their own values, and not necessarily due to the technology. The technology is merely enabling new structures, new marketing opportunities, new financial relationships, and new strategic opportunities.

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Being an information technologist, I have high expectations for the impact of technologies on the organizational strategy and structure, and I'm glad to see other disciplines recognizing that and trying to understand what it means from their values. Other schools are doing similar things, and I'm doing some work in concert with people at MIT.

Will EDI Superheat the Economy?

VW: It seems that EDI speeds up the transaction process, and that it might superheat the economic environment. I know you're not an economist, but from your perspective, is this a good or bad effect?

BK: One of the effects of establishing formal transaction standards communicating application-to-application at high speed across companies is that it can **"speed up the mess"** that already exists within and across organizations.

VW: What kind of mess?

BK: Too often, **the back-end systems are not ready** or able to receive or effectively process transactions on the same basis as the natural communications patterns have tolerated, or at least have normalized over time. For example, program trading is getting a bad rap in the financial arena, and I'm very concerned when we make judgements like that. Program trading as we know it is bad, but that's an indictment of the design, not the overall phenomenon.

VW: So the fact that downstream systems can't adjust to high speeds at the front end tends to inhibit users' EDI optimization, and also inhibits any good or bad effects of this heating-up process?

BK: It certainly will in particular industries without the proper thinking and preparation by individual organizations and professional associations. **The biggest mistakes I've seen in EDI are that organizations have not prepared for the impact the interorganizational link is going to make on them or on their market,** and in certain situations we're going to see the superheating scenario happen; in others, effective design will create an orderly and effective marketplace.

VW: What about to the larger economy? Do you see any impact, or is it more an evolutionary phenomenon spread out over time so that adjustments can be made?

BK: The fact that it introduces efficiencies is generally going to be very positive over time, if organizations are prepared to take advantage of these efficiencies. To the extent that it improves effectiveness, clarifies market transactions, and creates economies is a very good thing. To the extent that it creates competitive postures, competitive advantages, and introduces switching costs or even breaks down switching costs, allowing entries into markets where they hadn't been before, I think there are both good and bad consequences depending on what side of the effect you're on, and whether you're a pioneer, or reacting in the marketplace arena.

Initiating, pioneering, or reacting too fast may not be as advantageous as we hear in the media hype. I think the phenomenon we see happening as these linkages are established is generally going to be healthy as long as we plan for them. My only concern is that many organizations will not effectively plan. A part of that planning is the organizational learning that will be essential to prepare the organization for its future markets. That learning cannot always be accelerated. That learning needs to take place now.

An interesting phenomenon I see in some of the organizations we're studying is that they're recognizing that their entire transaction set is potentially subject to EDI. Therefore they need to establish and design a new architecture. They're going to treat a lot of their internal, interdivisional transactions as if they were cross-organizational. Therefore they'll have what I call the **organizational agility** to make the decision to outsource those kinds of transactions in the future. They're introducing some potentially near-term inefficiencies in the process to set up the infrastructure for future tactical flexibility.

GE Information Services Links to U.K. Joint Venture

GE Information Services and its joint venture with ICL in the U.K. called **International Network Services Ltd.** have been joined via a connection called **"The Bridge,"** creating an EDI community exceeding 2,500 users worldwide. According to the company, this means that multinational corporations such as ICI or Phillips can adopt paperless trading with partners or subsidiaries overseas, and that users on INS can exchange shipping documentation with those using port-oriented EDI services such as Rotterdam's INTIS community.

Members of the **European Council of Chemical Manufacturers' Federation (CEFIC)**, who have selected INS and GEIS for their trial runs, will be using the combined networks for commercial invoices, orders, and shipping documentation in the EDIFACT format as transaction sets become available.

Continued on page 10

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IBM Buys Telephone Company, Runs Statewide EDI

by **Aprilla Pfeule,**
Special Correspondent

In an announcement that has startled the telecommunications community, **IBM has announced its intention to purchase the Southern New England Telephone Company (SNET).**

"Wally Monteith (CEO of SNET) and I were golfing at the Winsor Locks Links," said IBM head **John ("Aces") Akers.** "We talked it over, and it seemed like a good idea. We already had a telephone switch company (Rolm), and now we needed a Telco. So we bet on it, and I won."

As part of the plans, **MCI,** the communications subsidiary of IBM, will absorb the **Electronic Mail Corporation of America,** which has been providing E-mail services to Connecticut corporations, and which recently introduced EDI to the statewide ConnNet packet network.

Connecticut is recognized as the nation's insurance industry center and home to one of the highest per-capita income groups in America. The insurance industry is a leading communications services user, and interest in **insurance EDI,** known as **"Interface,"** is set to grow rapidly. **PUTON, a Mountain View (CA) market research firm, forecasts 1470% average annual growth rate for EDI Interface.** "That's right," says Director of EDI Research Vince Weaver, "the network guys and the software guys won't be able to hire enough salesguys to take the incoming orders." Continued the EDI maven, "Information Services has never seen anything like it."

ConnNet, the statewide packet network, will also be used by **Trintex,** the IBM/Sears/and formerly CBS joint venture, to deliver home and business information services. With CBS out of the picture, the venture is being renamed **DuoTex.**

An IBM spokesman said "Connecticut is an excellent launching ground for broadly available electronic information. Network services, such as videotex and EDI, have languished long enough. It is time for IBM to take a leadership position in making these valuable services available." ■

April's EDI and Computer Glossary

Bar Code — A light-and-dark pattern used for identifying products in drinking establishments.

CAD — A low vulgarian, a loafer who likes ungentlemanly ways; the guy who sold you a Computer-Aided Design system.

CIM — Short for *Chaos is Manifest* or *Computers Inflict Misery.* Overused by computer press headline writers, as in *Living in CIM,* or *CIMplifying the Shop Floor.*

Cursor — The computer operator two days into running a new application.

Drag*Net — A law enforcement EDI pilot sponsored under a grant from the Law Enforcement Administration Agency.

Fish*Net — An EDI service provided by Fulton Information Systems (New York, NY) for the fresh fish market.

JIT — Abbreviation for *jitters,* an uncontrollable shaking experienced by Type A managers who are afraid that things won't happen on time.

JTL — Just Too Late. The practical side of JIT.

MIX — Musician's Instrument Exchange, an EDI service for the rock 'n roll industry, provided by *Rolling Stone* magazine.

MRP — Material Requirement Planning. A system to make sure all needed materials are available, in the right numbers, in the right location, at the right time before production gets goofed up. Alternative definition: *May Require Patience.*

MRPII — May Require Patience several times.

Pixel — The smallest addressable point on a VDT graphic of a fairy.

Terminal — a "dumb" device linked to a computer suffering from a life-threatening disease.

Turnkey System — A "complete solution" protected from the truth by the letter *n.* ■

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Harvard, EDI . . . from page 8

"We will present a customer with one network service, regardless of where its trading partners are located. This is what the market wants, this is what our customers have asked us to do, and this is what we have done" declared Lee Tate, managing director of INS.

Although the CEFIC project's specifications call for the X.400 electronic messaging standard, the link between GEIS' EDI*Express and the INS joint venture will be IBM 3780 protocol based. According to **Ken DeJarnette, GEIS' Manager for Advanced Logistics Programs,** X.400 was not used for the link because the joining is considered one network. The messaging standard is being called "a strategically important product for the future" by INS.

Meanwhile, INS keeps gathering clients and projects. Recent wins include a service called BACSNET for bank clearinghouse services in association with EDI, a contract with the National Freight Consortium for PC-based information exchanges, and a contract with North West Thames Regional Health Authority, also for PC-based data interchange services.

Legal Beagles Look at EDI

The American Bar Association has formed an Ad Hoc Subcommittee looking at how EDI and Electronic Mail are changing the way companies negotiate contracts.

Among issues being examined are electronic message ownership; the role of government, industry, and standards groups in resolving disputes; "the battle of the forms"; and the Statute of Frauds.

The study team is asking for copies of standard trading, service, and provider agreements for research. The identities of all parties sending documents will be held confidential. Those helping will receive a copy of the preliminary findings and a compilation of all document submissions (with identities removed).

Contact Michael S. Baum of Independent Monitoring Co., 25 A Frost St, Cambridge, MA 02140 (617) 661-1234. ■

News Bits

GEIS has named **Niels Nielsen** as **Manager for Trade and Transportation Logistics,** replacing Bob House who has joined a private consultancy. Nielsen previously headed the company's London-based international group, and the London office will now be integrated into the worldwide EDI effort.

Clint Packard, President and Founder of **Transettlements** (Atlanta, GA) has retired. **Hank Lavery Jr.** is now President.

EDI is receiving a high level of visibility inside **IBM.** The company is working with at least five software companies it considers "best of breed" in its **IMAP (Industry Marketing Assistance) Program.** Meanwhile, IBM has quietly raised prices for EDI on the Information Network by approximately 7%.

McDonnell Douglas' EDI group has gone through another reorganization, this one putting Telecheck, Payment Systems (credit card authorization), Applied Communications (OnTyme, etc.), and EDI together under **Network Application Services.** These groups are believed to be the heaviest users of the company's Tymnet Value-Added Network. Meanwhile, the network's Tandem-based EDI II implementation is running behind schedule. Talking about the reorganization, one veteran marketeer told us, "I've worked for 11 managers in three years in four different states — but it doesn't bother me now." ■

International News Bits

North American Rapporteurs to the UNECE Working Party 2 group on **international EDI,** who planned to go to **Japan** several months ago to encourage regional participation in international standards, now reports the trip is scheduled for May 9-13. A member of the delegation will provide INPUT with an exclusive report.

GEIS is reportedly working with one of its Japanese partners, **NEC,** on developing **Trade*VAN** domestic EDI services, and with its other Japanese partner **(ISI/Dentsu)** for a shipping service, which will have EDI and other capabilities.

Syntra Ltd. (New York, NY), an **export management software** developer that provides a multiuser micro- and minicomputer package called EX-TRA, **has added an EDI interface** to its package. EX-TRA deals with export documentation, facilitates order tracking, and provides linkages to freight forwarders, suppliers, and customers. Customers that have already been signed to use the enhanced package include Eveready batteries.

A **Cap Gemini Sogeti** subsidiary called SESA has formed a joint venture with **Bull** (the joint venture is

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called Societe d'Exploitation de Reseaux et Services, or SERES) to target EDI in France. ■

EDI Events

March 31-April 1, Hyatt Arlington, Arlington, VA. TDCC Training Program. (202) 293-5524.

April 5-7, Hyatt Regency Hotel, Bethesda, MD. EDI*Express (GEIS) Users Group Meeting. (301) 340-4036.

April 6-7, Drake Hotel, Chicago. EBDI IV, sponsored by the Credit Research Foundation. (516) 488-1166.

April 11-15, Washington, DC. Combined UNJEDI Meeting, hosted by the Department of Transportation.

April 14-15, Sheraton Inner Harbor Hotel, Baltimore, MD. EDI for Motor Carriers and Shipping Managers, sponsored by the American Trucking Association. Follows a three-day workshop on motor carrier computer systems. (703) 838-1721.

April 13-15, University of Wisconsin-Madison Management Institute, Paperless Purchasing. (608) 262-7357.

April 14, San Diego, CA. UCS Orientation Seminar. (513) 435-3870.

April 20-21, Hyatt Regency, San Francisco, CA. ANSI X12 EDI '88 Seminar — Changing the Way Business Is Done, sponsored by the Data Interchange Standards Association. (703) 548-7005. **Visit INPUT — Booth #1.**

April 21-22, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

April 26-28, Clearwater Hilton Hotel, Clearwater, FL. National Industrial Transportation League Data and Computer Systems Committee spring meeting. (202) 842-3870.

April 27, New York, NY, Introduction to Uniform Product Code and EDI, National Retail Merchants Association. (212) 563-5113.

May 2-3, 1988, Netherlands Congress Centre, The Hague, EDI In Practice, sponsored by The City of The Hague, CETIMA, and Elsevier Science Publishers. (+31) 10-436-0371.

May 2-3, LeGrand Hotel, Montreal, EDI Council of Canada User Group Committee meeting. (416) 621-7160.

May 11-13, Twin Bridges Marriott, Washington, DC, Principles of EDI, EDI Education, Inc. (312) 848-0135.

May 12-13, Scottsdale, AZ, UCS/WINS/VICS User Group Meeting. (513) 435-3870.

May 16-20, 1988, Pheasant Run Resort, St. Charles, IL. ANSI X12 Committee. (703) 548-7005.

May 17, Holiday Inn, Airport, Indianapolis, IN. ASSG EDI Support Group Meeting, sponsored by AIAG. (313) 569-6262.

May 18, New York, NY, Introduction to Uniform Product Code and EDI, National Retail Merchants Association. (212) 563-5113.

May 19, Holiday Inn, Des Plaines, IL. ASSG EDI Support Group Meeting, sponsored by AIAG. (313) 569-6262.

May 19-20, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

May 24, Holiday Inn, Strongsville, OH. ASSG EDI Support Group Meeting, sponsored by AIAG. (313) 569-6262.

May 24-26, Columbus, OH. Exchange '88, Sterling Software Ordernet, Eagle, Comm-Net User Group Meeting. (614) 459-7501.

May 25, Fairlane Manor, Dearborn, MI. ASSG EDI Support Group Meeting, sponsored by AIAG. (313) 569-6262.

May 25-27, Constellation Hotel, Toronto, Principles of EDI, EDI Education, Inc. (312) 848-0135.

May 26, National Bureau of Standards, Gaithersburg, MD. EDI — Bringing It Together in Government. (301) 975-3376.

June 1-3, New York Hilton Hotel, International Trade and Computerization Exhibition, sponsored by the National Council on International Trade Documentation. (212) 925-1400. INPUT will participate in a session on EDI in the Pacific Basin.

June 1-3, Constellation Hotel, Toronto, Principles of EDI, EDI Education, Inc. (312) 848-0135.

June 6-7, Detroit, ANSI X12 International Project Team Meeting, hosted by AIAG. (313) 569-6262

June 15-17, University of Wisconsin-Madison Management Institute, How to Manage Traffic the EDI Paperless Way. (608) 262-4856.

June 15-17, Newark, NJ Principles of EDI, EDI Education, Inc. (312) 848-0135.

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June 22-23, Crown Plaza, College Park, GA (Atlanta Airport), EDI Workshop, sponsored by TranSettlements. (404) 996-8109.

June 28-30, Detroit, MI, Principles of EDI, EDI Education, Inc. (312) 848-0135.

July 13-15, Marriott Hotel, Santa Clara, CA, Principles of EDI, EDI Education, Inc. (312) 848-0135.

July 28-29, Mark Hopkins Hotel, San Francisco. ELECTRONIC DATA INTERTRENDS, INPUT's 1988 EDI Conference, focusing on integration, interconnection, and internationalization. INPUT's analysts and guest speakers will present forecasts, survey results, new and continuing vendor roundtables, industry clearinghouses, and user case studies. Also: a cruise around San Francisco Bay, food, beverages, and more.

July 28-29, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

August 8-12, Hyatt Regency in Peachtree Center, Atlanta, GA, ANSI X12 Meeting. (703) 548-7005.

August 25-26, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

August 30-31, location to be announced, X12 International Project Team Meeting. (703) 548-7005.

September 12-16, Geneva, Switzerland, United Nations Working Party on Facilitation of International Trade Procedures meeting. (703) 548-7005.

September 19-23, Stuttgart, Germany, Combined US/European X12 International Project Team Semi-Annual Meeting. (703) 548-7005.

September 29-30, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

October 13, Washington, DC, UCS Orientation Seminar. (513) 435-3870.

October 20-21, Convention Centre, Toronto, EDI Council of Canada Forum. (416) 621-7160.

October 27-28, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

November 1-2, Queen Elizabeth II Conference Center, London, EDI' 88–the UK Conference on Paperless Trade, produced by Queensdale Exhibitions. (01)-727-1929.

November 3, Kansas City, MO. UCS Orientation Seminar. (513) 435-3870.

November 14-18, Hyatt, Los Angeles Airport, ANSI X12 Meeting. (703) 548-7005.

November 15-17, InfoMart Center, Dallas, TX. TransComp '88, Information Technology for Transportation and Distribution, sponsored by the National Industrial Transportation League. (202) 842-3870.

November 17-19, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

November 22-24, Rome (tentative) Second Annual EDI Italia Conference.

December 13-14, Washington Hilton Hotel, Washington D.C. EDI —Perspective '88, sponsored by TDCC/EDIA. (202) 293-5514.

1989

February 13-17, location to be announced, ANSI X12 Meeting. (703) 548-7005.

April 12-13, Hilton Hotel and Towers, New Orleans, ANSI X12 '89 Seminar.

May 15-19, Detroit, MI. ANSI X12 Meeting. (703) 548-7005.

August 14-18, Boston, MA. ANSI X12 Meeting. (703) 548-7005.

November 13-17 San Francisco or San Diego, CA. ANSI X12 Meeting. (703) 548-7005.

WE'RE NUMBER ONE!

Visit INPUT's Booth (#1) at the ANSI X12 EDI Seminar and Technical Exhibit April 20-21 Hyatt Regency Embarcadero San Francisco

Next month: EDI and the X.400 Messaging Standard.

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Vic —
What do you think about altering EDI logo so the arrows stand out more? (I thought the logo was 4 little white boxes in a box)? Does it matter?
Andrea

EDI INTERTRENDS

A KEY CONFERENCE ON ELECTRONIC DATA INTERCHANGE

Thanks

JULY 28-29

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A Monthly Publication from INPUT's **EDI Planning Service**

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IN THIS ISSUE:

- Update on International EDI
- More on Crowntek—Management Buyout
- Federal EDI Reported
- EDI at First Chicago
- Bank/EDI Software: ISI Interview

Customs, Other Agencies to Back EDIFACT

The U.S. Customs Service, the 100-member Customs Cooperation Council and the International Air Transport Association have all made recent statements in support of the developing EDIFACT international EDI standard.

Late this year, Customs will begin testing EDIFACT with several importers and start supporting the standard in the **Automated Broker Interface** module of the Automated Commercial System (ACS). This apparently marks the first time the agency has supported an industry-created standard.

The Brussels-based Customs Cooperation Council will recommend EDIFACT adoption by its members at their annual meeting this June.

The International Air Transport Association will gradually move its automated system over to EDIFACT as the new standard stabilizes and additional transaction sets are issued. To date, only the international invoice is being used on a trial basis, but purchase order, dispatch advice, payment remittance, and other messages are under development.

International EDI is the subject of a recently issued INPUT market study. ■

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Federal Government EDI—$196 Million by 1992

INPUT projects in a new report that federal government market demand for EDI and EDI-like products and services will increase from $97 million in government fiscal year 1987 to $196 million in 1992. The market will experience an average annual growth rate of 15% through the five-year forecast period.

In the federal government, EDI is used to transfer electronic purchase orders, invoices, bills of lading, tax information and financial reports. According to the study, the government's need for increased productivity and effectiveness, along with continuing budgetary constraints, will drive federal agencies to use EDI.

The report, titled *U.S. EDI Federal Markets 1987-1992* states that the 15% average annual growth rate (AAGR) stems primarily from Department of Defense spending for general purpose computer equipment and microcomputer EDI software. The computer equipment portion of the 1992 market will represent nearly 70% of the total and exhibits the strongest growth throughout the forecast period. However, the report also notes that "EDI software vendors will realize significant increases in marketing opportunities. Agency executives pointed to the wider availability of microcomputers as a key technology fueling EDI growth."

The report discusses present and future federal agency procurements, and specific examples of EDI opportunities for vendors are identified.

U.S. EDI Federal Markets analyzes agency needs and both agency and vendor software product selection criteria. Federal agency buyers tend to focus on user-friendly characteristics while vendors promote upgrading ease in offering their EDI software products. The report also examines technical and regulatory issues influencing the market, and major EDI initiatives in both defense and civilian agencies.

Also in the report is a discussion of the leading EDI vendors' views of the marketplace. Vendor and user issues and concerns are compared along with factors impacting the federal market for EDI products and services.

The study concludes that federal EDI will likely expand dramatically over the next few years because budgetary, policy, and technological factors are converging to propel EDI into a major place in the federal information systems marketplace. However, there are some impediments. Many agency, supplier, and vendor executives do not yet fully understand EDI or appreciate its market potential or its benefits.

INPUT expects this to change as the forces driving EDI become unavoidable. The government will need to overcome current EDI impediments, such as security concerns and EDI literacy, with better policies, safeguards, and user education.

Just as EDI is becoming more accepted in the commercial envi-

Continued on page 10

GOVERNMENT VERSUS COMMERCIAL MARKET DIFFERENCES FOR EDI PRODUCTS AND SERVICES

MARKET DIFFERENCES	
FEDERAL MARKET	COMMERCIAL MARKET
Greater Emphasis on Lowest Bidder/Price	Less Emphasis on Price
Wider Range of Regulations	Fewer Regulations
Lengthy Procurement Process	Shorter Buying Cycle
Large Volume of Classified Documents	Fewer Classified Documents
More "Custom-Type" Integration Projects	Less Customization in Projects

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Crowntek Management Buyout—Everything But Network Service

As reported in our last issue, **Crowntek**, the Canadian information services company, has sold its EDI network/processing services customer list to **Sterling Software's Ordernet.** However, **a group of five Crowntek employees, led by Gerry Diamond** (who developed the company's EDI offering), **has purchased the EDI software and professional services portion of the business.**

The new group, **Lakestone Systems Inc.** (416-496-2284) has set up shop in Willowdale, Ontario, focusing on the Canadian market, but also providing worldwide hotline support for **Metro-Mark's** full line of EDI software, including the new MVS*Translator, which it co-developed. Other services are consulting and training. According to Diamond, no network services will be immediately offered, although there have been discussions with vendors who want to work more closely with the startup. ■

EDI at First Chicago

Continuing the educational purposes of the ANSI X12 organization, **Ray Farrell, Purchasing Manager of the First National Bank of Chicago,** told a room of over 120 people at the last (1987) session about First Chicago's experience "at the cutting, or some would say, bleeding edge" of EDI.

The effort began in 1985 after a statement by the bank's president that the company would embrace EDI for its own procurement functions and to learn about the technique as a potential service provider. **They ran into difficulties related to being an early EDI practitioner, and the first in the services sector.** First, none of the bank's suppliers were quite ready for EDI. To encourage them, the bank "loaned" software (to be sold at a discount later if the partner liked the product), underwrote communications and mailboxing costs and gave away training and installation services. **They wanted their vendors to suffer no cash outlay, and they wanted to prove that it works.**

Costs were a critical issue. At that time, IBM compatibles and software prices led to a return on investment analysis indicating **it would cost more to do EDI, not less due to the need for dual systems,** one paper and one electronic. Of course, costs have moderated since then.

The bank's approach was modified and the original goals in terms of number of transaction sets to be supported were adjusted downward. Elaborate 25-point software and network service comparisons were done. A "bilingual" users' manual (English and technolese) was produced. As many as 65 people worked on the project during start-up.

But the effort started to pay off. In the first year, 1,200 transactions were handled electronically. Last year (1987) it was 4,800 transactions. **But this year, Farrell is looking at 20,000 electronic transactions, demonstrating the EDI "hockey stick" phenomenon of slow growth rapidly accelerating.**

Farrell said the often quoted cost of $50 for preparing a manual purchase order is based on a 1970 National Association of Purchasing Managers study. He asked rhetorically, "How many of you are getting paid the same as you did in 1970?" Since paper processing costs are so much higher, a gradually successful move to EDI is leading to **a savings of approximately $2.5 million per year,** not through staff layoffs, but by attrition and in other savings attributed to EDI's benefits. Today, the bank's purchasing department keeps few paper files. They have moved from 1 million paper-based procurement transactions to 200,000 this year. Next year this number will be reduced to 50,000.

Another benefit of EDI has been control and monitoring. **"It's like sending everything by registered mail,"** enabling quick file retrieval and no more excuses like "it's in the mail."

Chiding one vendor's slogan that EDI "makes business as easy as a handshake," Farrell noted that it doesn't if you don't have arms, and in the case of EDI, "arms" equates to internal automation first, before outside electronic trading.

To quote the ancient sage, "first things first." This was certainly the case at First Chicago. ■

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Interview: Interchange Systems Inc.—Targeting Bank EDI

ISI of Lexington (MA) has worked with the First National Bank of Chicago for the General Motors electronic payment system. ISI is related to two other concerns. One of its parents, Momentum Software, sells several packages to banks. One of these packages, **Bank Search,** is a data base describing how money is moved electronically to any bank. Another, called **Besslink,** is a PC-based money transfer enhancement to BESS, a **Data Architects** product. Carl Drisko, president of ISI, worked with that Waltham (MA)-based company for quite some time, forming his own venture about four years ago, and ISI maintains a relationship with DA.

Also related to ISI is a Chicago-based development arm called **CPI,** which was centrally involved with developing the custom software for GM electronic payments system—software which became ISI's newest product.

Although ISI's principal package, called **Netpay,** is targeted to banks for handling electronic payments, it is also a **full-featured translator** that will support the EDIFACT and X.400 standards. **Netpay can allow banks to do more than just move electronic payments. It can allow them to be full-service EDI providers.** There is also a corporate version of the software, called **NetMate,** intended for sale by banks to their customers.

In this talk with **Carl Drisko,** the discussion touched on a number of EDI-related topics, including how encryption and authentication fit an EDI environment, and what the banks may potentially offer as EDI service providers.

The questioning got started with a discussion of how Netpay evolved.

CD: **Netpay was developed for the GM paperless payments system.** GM asked a consortium of eight banks to build a disbursements network, with **First Chicago** as the lead bank. That entailed moving not only the information associated with what's being paid, but also making the payment. Given our background in Electronic Funds Transfer and wire transfer, we were good candidates to assist with that project and address some of the banking-related issues for moving around payment information.

VW: So Netpay is for EDI payments?

CD: Right, transactions that may have an enormous amount of data attached to the payment.

VW: Using the CTX format?

CD: We actually move it in **raw ANSI 820 payment message format,** with all of the appropriate ANSI controls for acknowledgement and validation. A number of the suggested standards are part of the software right now. For instance, we handle the encryption and authentication proposed standards right now.

Encryption vs. Authentication

VW: There had been concerns about encryption, basically the overhead problem and the difficulty of decryption. Is that still an issue?

CD: It's a problem in that **the value added networks sometimes don't support the data very well.** It's not that easy if you have data transmission problems in processing encrypted data. You can mess up a lot more data than just one character, so it's a much more complicated scenario. It's also a lot more difficult to manage the keys. We use the DES standards for that. It is a very complicated piece. GM wanted encrypted data, and that's why it's an optional part of this software. From my standpoint, **I would say that authentication is the appropriate way for people to go** because at least you can read the data that's there and still verify that the information is correct. Encryption really scrambles the information—you can't read it at all. However, the Department of Defense is very interested in encryption. There are specific types of transactions that I think are appropriate for encryption, but it's not for everybody.

VW: While we're on the subject, what are **electronic signatures?**

CD: When you use authentication, each character is processed through an algorithm, basically a checksum or a number to verify that each character is in the right order and the correct characters

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were sent. Only the originator and recipient are able to use two keys to perform this algorithmic processing and to certify that the information is there and is absolutely correct. You can tell if anyone has modified the information because the authenticator codes at the end of the message doesn't match up. When you're processing a payment, it's very important that no one goes in and changes the recipient's name or the account number or the amount. Authentication insures this. It could also be very useful in applications other than payments. For instance, when I want to order something and I sign a purchase order, with authentication, it's very clear I'm authorized to do that. You can trace down that this is valid and should be honored. **The fact that the authenticator results in the appropriate code is very similar to an authorized signature.** It shows that this ran through the right set of software keys to create an authentication code. It's a good way of validating the information went to the appropriate recipient and has not been tampered with.

VW: Netpay deals with the payment cycle, but **is it a translator?**

CD: **Yes.** It's really a combination of network services and bank applications to verify that sufficient funds exist, performing the necessary accounting, audit trails and operator security. It also can generate information in lots of different formats. It can take in an ANSI transmission and then send out information to a corporate customer in the CTX [Corporate Trade Exchange] format (if he knows how to process automated clearinghouse entries) or CTP [Corporate Trade Payments] or some of the Bank Administration Institute lockbox formats or even customized formats. **Translation software is part of Netpay's table driven piece which is almost the same as everyone's EDI software.** While Netpay has been geared primarily towards payments, we can process any type of EDI transmission—we have no real restrictions. We are more familiar with what each of the fields means in payments than we are for the other types of transactions.

Other Bank-EDI Services

VW: So it's a full featured package, supporting all kinds of documents?

CD: Right. **The purpose of Netpay is to be the backbone processing system within a bank for EDI, not just the payments process.** For instance, we've had discussions with banks interested in processing invoices. They'd like to receive electronic invoices from their customers, do the transmission for them, deliver them through whatever means most appropriate (electronic or printed), and they're going to base the corporation's credit line on the value of those invoices. Basically they're going to do asset-based lending using the value of the transmitted invoices.

There are major benefits in this to the bank. They don't have to audit to insure that this is in fact the amount the corporation is billing. They can increase their fee-based revenue by processing the invoices, plus it saves them real money. The corporation gets fast delivery of their invoices at a low price, but they also get their money faster, their credit line established quicker, and better funds availability.

We shouldn't look at banks as only processing payment transactions. The other obvious area for banks is letter of credit processing. As more documents become electronic, they can be reconciled electronically instead of by hand. There are lots of other areas we feel banks will be getting involved in, but they really need to be aware of what's going on in EDI.

Banks vs. Third-Party Networks

VW: It's almost as if the banks are competing with third-party service providers like GEISCO, McDonnell Douglas, and Sterling Software. . . .

CD: I think they are, but they're doing it in areas where they have real value to add, areas that are specifically banking transaction oriented. **If I was to advise a bank, it would be to look at where they can add value to the services they currently provide that are going to become more and more electronic.** What areas are really within their expertise? The banking community is there for a reason. Bankers need to look at their turf and where they really should be competing with the third-party networks. The networks can't move money, only the banks can at this point, so banks have a monopoly right now and I think they need to consolidate that position.

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Interview ..... *from page 5*

The other area we think banks will be very interested in regard ing EDI is cash management. As a corporation, if I have a hundred different accounts at a hundred different banks, I don't want to have a hundred different systems or need a hundred different proprietary formats to talk to those banks to affect money movement. We feel the banks had better realize that everybody is going to need to support the national standard, whatever that standard is, for movement of funds, and have those systems be an integral part of cash management applications. That way, a corporate treasurer can sit down and send his transmissions to all of his banks using the same software. If you've ever been in a corporate treasurer's office, you often see six or seven different PCs, each running on one particular bank's proprietary money transfer system. That's never been very acceptable. We see EDI helping that situation to get single feeds. The reason we do all of our translation into specific advising formats is so a bank can service a customer in the format he's most comfortable with. But we see more and more of a trend towards EDI transmissions rather than some of the historic formats that have been used.

VW: Netpay runs on what type of equipment?

CD: The entire VAX family of processors, from the MicroVax 2000 to their biggest boxes and VAX clusters. Also, a somewhat reduced function version runs on IBM PCs and compatibles. If a bank is looking for a pilot project and doesn't have significant volume, they can start on this version and migrate to the larger product as their volume grows without a lot of retraining or stress.

Relationship with DEC

VW: You were sharing a booth with Digital Equipment Corporation at the TDCC/EDIA forum in December. What is the relationship with DEC?

CD: **We're becoming a DEC OEM with the hopes of becoming a strategic marketing partner.** The paperwork is working its way through DEC, and they were very kind to allow us to exhibit with them. **We feel DEC should be a very strong player because of their connectivity.** DEC is very big in networking one disparate box to another among disparate applications, and that's where EDI falls. We also feel that because of the huge range of processing power on their equipment, all you need to do if you have increased volume is upgrade your hardware slightly using the same software. It's a much better way to go than converting to a new package. We feel they're very strong where EDI is right now and where it will be five years from now.

VW: Netpay developed out of a professional service contract and was then productized. Can you tell me more about its history?

CD: Netpay is derived from the original "Depth" system developed under contract to First Chicago for the General Motors network. We made massive changes to enhance functionality and make it more appropriate for any bank looking to get into EDI. We added formats and support for other ANSI transmissions to process invoices as well as payments. We added the appropriate transmission controls and pieces that other parties had developed for Depth, and packaged it. This is really a second generation payment system. We built the first one as well, so we're quite familiar with what goes on within its processing.

VW: Do you also provide **professional services** to integrate this application with others?

CD: Yes. **EDI is most useful when its integrated. It doesn't do you an awful lot of good to have it standalone,** although we feel the first thing some people have to deal with is getting information electronically. The first step is often to see it on a piece of paper, but it doesn't take long for them to say, "Well, yeah, that's the same stuff I was getting before. Now hook it into the accounting or XYZ system." That's an important part of what we do; tieing into custom systems or enhancing our functionality. For instance, some banks are looking to offer reconciliation services. Rather than the corporation reconciling their invoices with their payments, the bank would do it much like they now do check reconciliation. There may be some other pieces in the offering in the not too distant future.

VW: What's in the future for ISI?

CD: We're going to be supporting the EDIFACT standard and an X.400 connection. We'll be doing some performance enhancements to our software. We may be converting to a different,

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SQL, data base package. One unique feature of our system is that we don't store independent separate files like most people. We store information in a relational data base so you can track how the information got permuted from one transmission to another. We actually store information in a format very close to native X12, which allows us to inquire against various fields. You really don't have that if the information is stored in a flat file or the form in which it was transmitted.

VW: What price range are we talking about for Netpay?

CD: Netpay running on a Microvax II starts at about $125,000. Our PC version starts at $25,000 for the basic system.

VW: What's included?

CD: Communications, translation software, training and installation for about a week, support, translation into different ACH, and many different BAI lockbox formats, which, by the way, was one of the standards that never quite got standardized. You also get the accounting and settlement functions so you can clear your position with another bank if you're exchanging transactions, which is necessary to reconcile your position. Normally, you're exchanging payments with another bank. You do a net settlement rather than turning every customer transmission into a payment. Its actually a "net net" settlement between all the banks exchanging payments. It also has pieces allowing you to forward payments to other banks who are affiliated processors. So there are some options.

We're just coming out with another product called NetMate which is the corporate side of this, allowing a bank's customer to receive electronic information and integrate it into an accounting package. It will be available this quarter for distribution by the banks. We see a wholesale price of somewhere around $1,000. It will have fairly minimum functionality but it will do all of the communications acknowledgements and exchanges to insure proper ANSI message transmission. It will print out advice information, and optionally, it can translate into BAI formats at the corporation level rather than the bank level. Future versions will have enhanced functionality.

VW: Will Netmate be strictly for financial transactions?

CD: No, it will also process all types of EDI transactions. But again, the key to EDI is integration with existing systems. We know lots about accounting systems and how to work into those.

Comment: With Netpay and NetMate, ISI is taking a different tact in the EDI software market, targeting banks as EDI service providers and distributors of EDI software. While ISI claims experience in accounting and bank system integration, it admits lacking background in some other integration avenues, such as shipping notices. However, they do hope to expand their experience and are acquiring a knowledge base now for future fits for their EDI solution. ■

International News Bits

IBM's joint venture with the **Copenhagen Telephone Authority, called danNet,** goes into piloting soon, with plans for full operations by the end of the year. EDI is among services to be offered. The construction industry is being specifically targeted.

GEIS has announced its link between EDI*Express and its U.K. joint venture with ICL, International Network Services (INS). This connection will provide the first trans-Atlantic EDI third-party service. More details next month.

The National Council on International Trade Documentation is planning a session at its annual conference on **EDI and Electronic Information Systems for International Trade and Transportation Transactions.** Speakers from Japan, Korea, and Hong Kong are expected at the event which runs June 1-3 at the New York Hilton. **INPUT** will present its findings on International EDI at the June 2nd session. ■

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"No Need for Paper," Says President, American President Lines

"Within our company, our goal, our mission, our objective, is to eliminate paper. We see no need for any of the paper that we use today," said Timothy J. Rhein, president of American President Lines, at a recent San Francisco meeting of members of the trade community.

The multimodal transportation company executive described APL's strategy of expanding upon its traditional role as a point-to-point carrier to use intermodalism (ships, trains, planes), telecommunications networks, and computers for an integrated transportation and distribution service.

However, paperwork consistently impedes the efficient movement of cargo. Speaking at a National Council on International Trade Documentation forum, the APL president said, **"We're all held hostage by the paper,** more so than we realize." Rhein said there's a need to constantly evaluate the trade documentation process rather than overemphasize technology as a solution. "Because of a failure to attack some of the long-standing procedural conventions followed by business and government, there are many areas in an otherwise modern, technologically sophisticated, international industry where businesses are unable to fully exploit their capabilities."

The APL president said that in the early 1970s, NCITD determined that an average international shipment required 46 separate documents and 360 copies of those documents. While some forms have been eliminated since then, new ones have been introduced, resulting in little change. "The fundamental procedures have not been challenged," maintained the shipping executive. **"In many instances, different forms require submission of the same standard information. Ninety percent of the forms . . . are solely for internal filing and classification of other forms submitted by other agencies."**

Citing specific examples of the paperwork bureaucracy, Mr. Rhein noted that even though carriers and customers can now send electronic bills of lading, they still must file hard copies of this same information because government regulations have not been amended to recognize the technological advancement.

But all is not hopeless. Rhein cited several EDI-related programs which have improved trade documentation, and credited U.S. Customs for implementing the Automated Commercial System (ACS) which supports electronic trade document filings. However, Rhein said that **although there are positive developments, "this piecemeal approach has failed to keep pace** with the need for faster deliveries of large volumes of international freight, supporting highly sophisticated sourcing and distribution systems. There continues to be a tendency to look for technological solutions at the level of bits and bytes. A wholesale examination of the underlying paperwork process may be more effective."

Rhein closed by encouraging the NCITD to continue with its mission of promoting reform by removing unnecessary documents, addressing outdated regulations, and suggesting agency reorganizations that will ease procedural changes. From an IS/EDI perspective, he encouraged funding support of automated government systems and promoting compatible electronic systems overseas. **"The regulatory agencies need to be brought into the 20th century. Otherwise a lot of the efficiencies and technological advances we're making will never really get into high gear."** ■

News Bits

True to his word, **Ed Guilbert, former president of the Transportation Data Coordinating Committee/Electronic Data Interchange Association,** is "in the marketplace" with a new venture: **Guilbert Associates, Inc.,** phone—(202) 785-4365. From a Washington D.C. office right down the hall from his old haunts at the TDCC, the new company offers strategic and tactical planning, training, conference management, headhunting, and venture capital services.

CompuServe announced **availability of its EDI offering** on February 1, which combines standard EDI with the company's corporate information management services (data bases, electronic publishing, computer conferencing) and InfoPlex E-mail. X12, X12-derived, and the TDCC family of standards (UCS, WINS, shipping) will be supported. CompuServe's service will be sold and serviced through its 30 offices nationwide. See the No-

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EDI Reporter 1987 Index

January: TDCC/EDIA conference announcements: CDC software, MSA/Transettlements/GEIS agreement, IBM distributes software, Ordernet expands X12 services, new software companies. Compat '86 report. INPUT European EDI Market Opportunities Report issued. Interview: Western Union. Bits: Telecom Canada/Trade Route, IBM's Shipnet.

February: CDC staying in EDI. Feature: Mainframe Integration (Interview with MSA/GEIS). Bits: Sterling Software/DCA agreement, GEIS/Distribu*Net agreement, GE/ICL form INS.

March: MDC and BT end UK joint venture. X12 Meeting. GEIS User Group meeting. Needed: Detailed EDI billing. Productivity and EDI. DNS Interview. Update on last issue.

April: Tax Time and EDI (paperless filing), Kleinschmidt sold to management. Case Study: Kodak. Bits: U.K.'s Shipnet/Dish, GEIS Negotiating in Europe, "Winenet." Fishnet debuts from Fulton Information Services (April Fool!).

May: RBOCs and EDI (Ameritech/GFI). Credit Research Foundation conference. RJ York and Associates.

June: Interview: ACS, Inc.. INPUT's EDI Services Report forecasts $1.9 billion in 1992. Value Added Data Services in Europe Report issued. Bits:

Continued on page 10

vember issue for an interview with David Bezaire, the company's Manager of Communications Product Marketing.

Add another "major" software company with an EDI position. **Pansophic Systems** (Oak Brook, IL) will recommend Concord California-based **ACS'** EDI software to its customers. ACS handles installation, service, and support and pays Pansophic for the referral.

IBM has agreed with start-up **Quick Response Systems, Inc.** (Greenbrae, CA) to co-market a **universal product code catalog** through the Information Network. Retailers establish a preferred standard inventory profile with suppliers who monitor stock levels. The system links with EDI functions to restock the shelves. Piloting is scheduled for June, with Dayton Hudson, Playtex, Carter Hawley Hale, and Hanes Hosiery reportedly committed to the test.

IBM is now applying its **Marketing Assistance Program** (MAP) to the Information Network's EDI service. Third-party software or turnkey system products are put through attachment testing, and IBM salespeople go on joint sales calls with the third party to offer a complete solution.

GE Information Services has entered a **new EDI agent agreement. Can/Am Tech** (Hamilton, Ontario, and Pittsburgh, PA) will be selling, installing, and supporting EDI*Express services to the metals industry, using Cam/Am's E-Z-Order software.

Sterling Software's Ordernet has introduced a **9600 bps dialup service** using the CCITT V.32 modem standard. The new high-speed service is priced at $75 per month and $.55 per minute, and will save money for customers now exceeding 428 minutes per month in connect time. **New staffers** at Ordernet are **Sue Coburn** from McDonnell Douglas' EDI group, with responsibilities for major EDI programs for mass merchandisers and national retailers, **Barb Williams** from Comtech Systems for services to the health-care industry, **Linda Franklund** from ITT Courier Information Systems, to market UCS (grocery) services and software in the Midwest, and **Jim Davis** from Contel, targeting hardware, housewares, and related Eagle service prospects.

American Business Computer has been named to **INC magazine's list of the 500 best** and fastest-growing U.S. companies at #221. Although ABC is the only EDI company so honored, **Ann Evola Hurtubise**, Senior Account Manager, notes that this lends credence to the belief that yes, the industry is growing.

Southern Pacific Transportation has added three programs to the **SP Liberator** package: Reports, Rate Requestor, and Auto Release/Car Release. Using software the rail provides, customers can link to SP's mainframes (and only their mainframes) for logistics information. ■

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EDI . . . . from page 9

Sterling's EDI/LaserMail, GEIS has 700, ADP, Istel and Systems Designers.

July (Bonus Issue): Telenet hints announcement at INPUT conference, software panel added. Bits: CompuServe announcement expected, GEIS at 1,000, **(Regular Issue):** X12 meeting. "Electronic Cocaine"—Ordernet User's meeting. UCS meeting—a merger with X12? Bits: IBM/Fiat venture, Vanguard program, Edict.

August: Telenet/Ordernet Announcement at INPUT conference. Interview: Sterling Software (Ordernet). NITL Conference on International EDI. UNJEDI Meeting. Bits: BOC to sign resale agreement, MSA's EDI Expert released, military commissaries using UCS, Arthur Anderson sees wholesale distribution restructuring, IBM clones IVANS in UK, EDICON, Vanguard.

September: Paul Olson resigns EDI*Net. X12 meeting. Interview: Builder's Square. INPUT's Software Reports issued. Bits: Tax reform act of 1986, 25-cent stamp and EDI, Western Union EDI Service in Beta, Phillis Sokol joins Sterling, APL Group moves, adds staff, Bobbin Show Announcements (Design*Express, ACS), SITPRO software, GM signs with Edict. EDI Stats: Top X12 software providers.

October: Interview: TranSettlements. EDI Conferences planned. EDI Book Reviews. TranSettlements unbundles. GEIS News: Microdynamics agreement, UPC/barcode support. Bits: GEIS/ISI-Dentsu agreement, EDI, Inc. new software.

November: BOCs and EDI (Ameritech, iNet America). Videotex and EDI (SchweberNet, Videolog, WSSDOM, Design*Express, Electronic Forms). EDI in Canada (Telecom Canada interview). CompuServe and the EDI Nation (interview). New GEIS pricing. EDI*T Version 2.3 released. Bits: GEIS wins CEFIC, EDICT endorsed, Istel survey. Agencies and Associations in EDI.

December: It's TEDI from Telenet. Interview: Telenet. EMA Conference. E-mail and EDI Integration. X12 Meeting.

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■

Federal . . . from page 2

ronment, federal EDI, driven by the same dynamics impacting commercial firms as well as by some unique issues, will grow. Each sphere of influence—federal and commercial—will have expectations of the other, further fueling the overall EDI market.

U.S. EDI Federal Markets 1987-1992 is available from INPUT's Federal Government Research Office at 8298 C Old Courthouse Road, Vienna, VA 22180 (703) 847-6870 or INPUT's headquarters, 1280 Villa Street, Mountain View, CA 94041 (415) 961-3300. ■

EDI Events

March 10-11, Hilton Hotel, New York. The Paper Industry's EDI Seminar, sponsored by the American Paper Institute. (212) 340-0600.

March 15, New Orleans Hilton. EDI: The Coming Revolution in the Health-Care Industry, sponsored by the Federation of American Hospitals, Health Industry Manufacturers' and Distributors' Associations. (501) 661-9555.

March 24, Greenwich Civic Center, Greenwich, CT. International Trade and Communications Show and EDI Seminar, sponsored by the Connecticut Maritime Association. (203) 622-6800.

March 31-April 1, Hyatt Arlington, Arlington, VA. TDCC Training Program. (202) 293-5524.

April 6-7, Drake Hotel, Chicago. EBDI IV, sponsored by the Credit Research Foundation. (516) 488-1166.

April 11-15, Washington, DC. Combined UNJEDI Meeting, hosted by the Department of Transportation.

April 13-15, University of Wisconsin-Madison Management Institute. Paperless Purchasing. (608) 262-7357.

April 14, San Diego, CA. UCS Orientation Seminar. (513) 435-3870.

April 14-15, Sheraton Inner Harbor Hotel, Baltimore, MD. EDI for Motor Carriers and Shipping Managers, sponsored by the American Trucking Association. Follows a three-day workshop on motor carrier computer systems. (703) 838-1721.

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April 20-21, Hyatt Regency, San Francisco, CA. ANSI X12 EDI '88 Seminar—Changing the Way Business is Done, sponsored by the Data Interchange Standards Association (703) 548-7005. **Visit INPUT — Booth #1.**

April 21-22, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

April 26-28, Clearwater Hilton Hotel, Clearwater, FL. National Industrial Transportation League Data and Computer Systems Committee spring meeting. (202) 842-3870.

May 2-3, Netherlands Congress Centre, The Hague. EDI In Practice, sponsored by The City of The Hague, CETIMA, and Elsevier Science Publishers. (+31) 10-436-0371.

May 2-3, LeGrand Hotel, Montreal. EDI Council of Canada User Group Committee meeting. (416) 621-7160.

May 12-13, Scottsdale, AZ. UCS/WINS/VICS User Group Meeting. (513) 435-3870.

May 16-20, Chicago, IL. ANSI X12 Committee. (703) 548-7005.

May 19-20, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

June 1-3, New York Hilton Hotel. International Trade and Computerization Exhibition, sponsored by the National Council on International Trade Documentation (212) 925-1400. INPUT will participate in a session on EDI in the Pacific Basin.

June 15-17, University of Wisconsin-Madison Management Institute, How to Manage Traffic the EDI Paperless Way. (608) 262-4856.

July 28-29, **Mark Hopkins Hotel, San Francisco. ELECTRONIC DATA INTERTRENDS, INPUT's 1988 EDI Conference,** focusing on integration, interconnection and internationalization. INPUT's analysts and guest speakers will present forecasts, survey results, new and continuing vendor roundtables, industry clearinghouses, and user case studies. Also: a cruise around San Francisco Bay, food, beverages, and more. Preliminary program brochure available in April.

July 28-29, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

August 8-12, Atlanta, GA. ANSI X12 Meeting. (703) 548-7005.

August 25-26, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

September 29-30, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

October 13, Washington, DC. UCS Orientation Seminar. (513) 435-3870.

October 20-21, Convention Centre, Toronto. EDI Council of Canada Forum. (416) 621-7160.

October 27-28, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

November 1-2, Queen Elizabeth II Conference Center, London. EDI '88—the UK Conference on Paperless Trade, produced by Queensdale Exhibitions. (01)-727-1929.

November 3, Kansas City, MO. UCS Orientation Seminar. (513) 435-3870.

November 14-18, Los Angeles, CA. ANSI X12 Meeting. (703) 548-7005.

November 15-17, InfoMart Center, Dallas, TX. TransComp '88, Information Technology for Transportation and Distribution, sponsored by the National Industrial Transportation League. (202) 842-3870.

November 17-19, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

December 13-14, Washington Hilton Hotel, Washington, DC. EDI—Perspective '88, sponsored by TDCC/EDIA. (202) 293-5514.

November 22-24, Rome, Italy. (tentative) Second Annual EDI Italia Conference.

April 12-13, 1989, New Orleans, LA. ANSI X12 '89 Seminar. ■

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Next Month:

Report from the Dallas ANSI X12 Meeting

The EDI Reporter goes to Harvard

April Fool EDI Giggles

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A Monthly Publication from INPUT's **EDI Planning Service**

Vol. 3 No. 5 May, 1988

IN THIS ISSUE:

- DISA San Francisco Show: The Audience Stars
- DEC: "Very Serious About EDI"
- EDI and X.400
- Interview: Union Pacific Technologies
- INPUT' EDI Conference Plans —July 28-29

EDI Comes to San Francisco

At a fund-raising benefit for the Data Interchange Standards Association (DISA), the secretariat for the ANSI X12 committee, one of the featured speakers took the audience on a time journey back to the first EDI, in Napoleon's time, while the other seemed to claim that EDI can solve world hunger.

It was an ambitious "opening night" beset with missed sound effect cues and some strange musical introductions. Presenters retold stories about the bears in the forest, alligators in the swamp, and blind men scanning elephants. A would-be EDI evangelist proved that Ed Guilbert's reputation in that role is safe.

One thing did seem clear. The real stars of this event were the attendees. While 600-800 were expected, 1,200 showed up. Booth space went almost as soon as it was available. The San Francisco setting "uplifted" attendees, who asked good questions in the sessions we attended and got into technical and managerial discussions amongst themselves in the hallways and buffet lines.

Veterans of other trade shows commented on the knowledge and awareness levels shown by the attendees, indicating that EDI is, well, maturing and that EDI project managers are also becoming more aware.

The key question is no longer "What is EDI?" but "What ELSE is EDI?"

On the Trading Floor

Exhibitors groused about shutting down the exhibit hall while attendees went to seminars. As would be expected, the vendors made many product announcements and did some aggressive hustling.

TranSettlements continues to adapt to a changing market, indicated by several pre-announcements: **TransFact** will translate business messages into and from the EDIFACT syntax. **Trans*EDI**, available now with limited transaction sets, is a micro product designed for low-volume companies who must satisfy the EDI requirements of several trading partners. **TranSlink** is

Continued on Page 2

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INPUT®

designed for fault-tolerant processors. The package combines the abilities of the company's TranSlate mainframe/mainstay translator with **TranSend**, the store and forwarded software that is used on the company's EDI network service, and by **Martin Marietta Data Services** for its EDI offering (see below).

In other announcements, **TranSettlement's TranSend package has been ported to the Tandem environment**, and a deal is being signed with On-Line Transaction Processor (OLTP) manufacturer **Stratus Computers. Tandem** has also signed a joint marketing agreement with **EDI, Inc.** The OLTP companies, including Prime, Tandem, Status, and presumedly DEC, are positioning their product as EDI machines, especially for high-volume environments.

Speaking of DEC, the Marlboro, MA-based company made its second appearance at an EDI event, prepping the market for an expected summer announcement. Multiple software houses (including the **APL Group**) told us of plans to write DEC versions of their packages.

Sterling Software's Ordernet division (Columbus, OH) announced that Version 3 of its GenTran mainframe/mini translator will be available June 1, with VAX support in addition to IBM and HP 3000 versions. Other features of the new version are an on-line CICS partner file maintenance feature and provisions for EDIFACT formats. The package is the same as the **R. J. York/EDI Solution's EDITran** product. Meanwhile, **Sterling Software Marketing** (a different division based in Rancho Cordova, CA) showed its Tracs and SuperTracs family of communications software as being EDI-capable.

New for **American Business Computer** is a product called the EDI Management System, which runs under the **UNIX V** operating system on midrange computer systems. The modular product can be customized for specific circumstances. This is represented as being the first for systems such as the NCR Tower, Northern Telecom's Merridian DV1 advanced integrated voice/data system, and AT&T's 3B2/300-400 series.

On the EDI services side, **Martin Marietta Data Systems** (MMDS) made its first public EDI appearance. Its EDI service for the **General Services Administration** is using TranSettlement's TranSend in a time-sharing environment. According to the company's Butch Mills, the federal and commercial sides of MMDS are now coordinated and an offering for the EDI community may be expected from the large defense contractor.

The reported **Westinghouse EDI Service** (beyond that done for Westinghouse customers) appears to have been a **trial balloon**. No one told the supply side of Westinghouse (which uses EDI as a marketing tool) that a service was being considered.

Control Data and ACS Network Systems (Concord, CA) announced a joint marketing agreement that adds the IBM S/36 and 38 packages to RediNet's PC offerings.

Security Pacific revealed its intentions to offer several financial services, such as Customer Account Analysis Reporting, using the ANSI 822 transaction, Lockbox services using the 823, and EDI Payment Order/Remittance Advices (820) for transmission through Automated Clearing Houses. The bank is currently in beta testing with one Security Pacific supplier for at least one of these services, packaged under its Cash Management unit.

In the Bag

Because booth space was in short supply, would-be exhibitors were invited to distribute product literature in a manila envelope. Among the goodies found were descriptions of several modules to **Perwill's** EDI/3000: EDIMGR/3000 assists EDI communications coordination, interfacing with applications. EDIFORM/3000 takes existing transaction files and rearranges the data into EDI segments. EDIPARSE/3000 takes flat files and produces EDI segments in a chosen standard, adding control segments. EDILINK/3000 handles EDI communications. The company, based in the U.K. with offices in West Germany and Riverside, CA, offers products and professional services for the HP 3000 and Spectrum.

Also "in the bag," **Chase Trade-Info** (San Francisco) introduced EDI/logistics services for large volume overnight/express delivery shippers. The service acts as a service bureau, evaluating billing tapes, checking rates, verifying delivery, handling billing adjustments and settlements and updating of accounting systems for both shippers and couriers. The service addresses the fact that overnight shippers spend up to 30% of their express delivery budgets on paperwork. Future enhancements include electronic payment services.

In the Sessions

Texas Instrument's Paul E. Moo told of his experiences in making EDI decisions, finding that due to his company's size and number of transactions, it was more economical to do EDI themselves than to use a third party. The final issue Moo addressed was avoiding EDI altogether. The answer, a reference to

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the movie *High Noon* was given on a slide and in a Texas drawl: "Slim has left town!" He meant that EDI is unavoidable.

In one of the "Role of VANS" sessions, CDC's **Bob Murphy** pointed out that anyone involved in EDI for two years can now be considered an expert. **Ken DeJarnette of GEIS** noted that EDI is more than a new technology—it's a business decision—and cautioned attendees to make certain EDI can, in fact, be an added advantage to their companies. Case studies from the distribution and retail industries and a look at mini and mainframe EDI applications were the centerpoints of IBM's Trish Kirkpatrick's presentation.

The keynote speaker, **Levi Strauss Chief Information Officer, Bill Eaton**, punctuated his talk with snatches of songs and sound effects, highlighting the strategic value of rapidly exchanging information by referring to the role of the carrier pigeon in the Battle of Waterloo. He reported massive savings and increasing sales in the apparel industry, with less inventory holding costs. He noted that strategic partnerships and EDI links provide more bottom-line benefits than any other opportunity he knows about. "Every day of lead time ... can represent millions of dollars." He called EDI and linkages with customers a strategic part of the second information age.

Featured speaker **EDI consultant Jack Shaw** started his presentation with words from the Arthur C. Clarke film *2010*: "Something wonderful is happening" and forecast a number of things for EDI, including expert systems to process EDI transactions, a single, worldwide EDI network with 25 different service providers exchanging EDI data under the X.400 standard, the merger of ANSI X12 and EDIFACT, the fading of UCS, WINS and TDCC formats, and higher growth for the EDI market overall than has been previously forecast.

Shaw called for a personal commitment to EDI, saying that EDI can serve to bring the nations of the world closer together. The consultant reported that EDI has become a prerequisite in several industries but improvements are needed, that the nature of EDI success is directly proportional to the level of upper management understanding and the commitment to use EDI for strategic benefits. According to Shaw, **"Management ignorance is the greatest impediment to EDI."**

The ANSI Committee and DISA will do it all again April 12-13, 1989 in New Orleans, learning from its experiences and no doubt featuring an even more aware audience—the real stars of this year's ANSI X12 seminar. ■

DEC: "Very Serious About EDI"

"We're very serious about EDI. We're devoting a significant amount of money and human resources towards it," said a Digital Equipment Corporation product manager to INPUT recently. He also said, "We believe EDI is a natural extension to the things we've already done in networking and systems integration, and these elements are very key to what corporations want to do."

What's up at DEC?

The company has been using EDI internally for several years, and about 18 months ago it formed an EDI Board of Directors consisting of high-level executives representing manufacturing, marketing, purchasing, MIS, and other areas potentially impacted by EDI. The Board's charter is to oversee DEC's internal implementation and provide input for future applications. Just as DEC extensively uses its own products for Electronic Mail and Office Videotex (among others), such will be the case with EDI, too.

It's believed that DEC will use INPUT's EDI Intertrends conference (July 28-29) as a forum to discuss its EDI program.

Meanwhile, a published report from London reveals that Digital Equipment Co. Ltd. is planning pan-European value added services, with EDI and financial applications. DEC's Value Added Network Systems Division in Berkshire, announced a year ago, has been in pilot testing. According to DEC sources, EDI in Europe will be targeted to large companies doing business in multiple industries, and presumably internationally. Part of the thrust is to take advantage of the U.K. Financial Services Act, which will drive more intercompany communications, opening new opportunities. According to *Value Added Network and Data Services—European Market Directions*, a study published by INPUT, Ltd., the European market for VADS will grow from $325 million in 1987 to $1.8 billion by 1992.

So far DEC has "no comment" regarding possible U.S. VAN/EDI services. ■

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EDI and the X.400 Message-Handling Standard

"Do we want two networks, one for electronic mail and one for EDI? Not if we can help it," said **Ted Myer, Director of Consulting Services for Telenet,** speaking at an **Electronic Mail Association** event in Ft. Lauderdale on EDI and the X.400 Messaging Standards.

Myer went on to suggest that X.400-based transfer networks can do both jobs—E-mail and EDI, and perhaps others, and that X.400 provides all the pieces needed to move transactions between third-party network service providers.

Myer traced the history and status of the potential link between EDI and the message-handling standard, saying that ANSI X12's C (Communications) committee studied the matter and concluded there were ways, in the long run, that EDI will benefit from X.400. Guidelines were developed and passed to the National Bureau of Standards Special Interest Group on X.400, leading to an agreement between X12 and the NBS on the technicalities of using X.400 to move EDI transactions, an event Myer called **"the Golden Spike."**

Further, the CCITT international standards association has put EDI on its agenda for the coming X.400 study cycle and will therefore give more attention to the matter over the next four years.

Myer said that X.400 is being seen primarily as a means to interconnect network services, and not end users—yet. It is seen as a long-term solution to be implemented over the next two decades as the world moves to the Open Systems Interconnection model. However, some users do want X.400 now.

"N Times Awesome Potential"

Myer compared Electronic Mail and EDI, saying that E-mail messages are typically short and used mostly intra-company. He said that traffic has been building slowly as people discover the EDI medium, and that it displaces some mail and voice communications. It has "awesome potential," but, according to Myer, EDI has an "N times awesome potential," or an exponential potential relative to E-mail. EDI messages are typically long (a stream of trading data) and sent between companies. EDI traffic is building quickly since it is replacing existing paper-based traffic between companies. "In the end," says Myer," it's going to be a much larger traffic component than interpersonal traffic."

Few providers in E-mail are interconnecting their systems now, but if they all get involved in EDI, linking will become almost a requirement because "that's the whole reason for doing EDI through X.400—to interconnect the service providers." **Myer called the lack of interconnection a logjam and said that by offering EDI, the logjam will come apart.**

Ted Myer thinks we're heading toward a global transfer system carrying both types of messaging traffic and many others. As time passes, more and more messaging systems are being linked, and Myer cited the fact that Telenet has been licensing its Telemail's X.400 software to PTTs and service providers worldwide. "What we're seeing is the formation of a general message transfer backbone which will almost certainly be in place in another few decades." Further, he said that the next version of an interbank network will be based on X.400.

Marshall Spence, President of the EDI Council of Canada, described the evolution of EDI in Canada, which, by EDICC mandate, is based on third parties. He also reported that Eastern-bloc countries are now into EDI, and there is Soviet interest in doing EDI with the Canadian Wheat Pool. Spence says that unless the CEO is involved, it won't work: "This is a top-down management tool."

GM Canada is the country's largest company and has moved away from electronic invoices to use "evaluated receipts" from which to pay bills. The company went to Canadian banks for help, but they didn't understand the concept, so First Chicago is now GM/Canada's bank. Spence reported that having learned their lesson, all the major banks in Canada have joined the EDICC and are looking at EFT EDI as a payment mechanism.

Relative to X.400, Spence reported that the first major issue addressed by the EDICC's vendor committee was interconnection. Canadian users see this as important, but the market reality is that with the open mailbox concept, the EDICC found that not one company was willing to use an interconnection. An EDICC interconnection study concluded that a long-term solution will be X.400 but that users will also look at short-term alternatives, such as the open mailbox concept.

However, Spence also said that Canadians are normally cautious (unlike Americans) and don't like lack of security and passwords in open mailbox implementations, so the open approach is not well liked. He said that companies would rather

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connect to multiple networks rather than use an interconnection. For example, Proctor and Gamble reported that it costs $100 to $200 extra per month to use multiple networks since interconnection led to double charges anyway.

Spence believes that due to the trading relationship between the U.S. and Canada and the pending free-trade agreement, X.400 will be needed within a year. He reported that Telecom Canada and AT&T are actually exchanging messages now via X.400.

Paul Lemme, Executive Director of the TDCC/EDI Association decided to abandon his prepared comments to "tell it like it is" and reacted to comments from previous presenters. He said **there is another approach to allow companies to interconnect and that is to communicate directly with their trading partners rather than use third parties.** The alternative is to sign with multiple third parties and pay monthly minimum charges.

Lemme feels that store and retrieve implementations are not productive, that there's a built-in delay, which does not jibe with JIT philosophy for many companies due to unproductive call-ins to check what may be empty mailboxes.

The EDIA executive said that third party interconnection exists now, that most vendors are doing it and it's simply a function of the third party's willingness to do it.

Commenting on Myer's history of the standards, Lemme felt that something was missing: UCS is an existing communications standard, the only one dealing with these issues, and it has come up with an answer. "I don't understand how it can be ignored in a history [of EDI] since a large segment of EDI users today have solved the problem" by using UCS, which provides for direct connection.

Lemme continued, "I think we're looking at a problem which has been solved, and by failing to recognize that solution, we spend a lot of time in meetings and not moving forward very quickly." He did acknowledge that a number of enhancements need to be made but maintained that the issues being presented at the forum have been addressed and there is a solution which "seems to work."

Lemme described EDI system requirements which X.400 designers must address: Timeliness (data must be received in time to do business), security, and response. On the last point, Lemme said that EDI needs an intelligent response system, that a simple acknowledgement is not enough. The response must verify that the information passed was readable by the trading partner. "X.400 has to deal with these objectives and requirements, and if it can specifically, it will come into place, but currently I don't know that it addresses these issues very well."

Guy Genilloud of the Swiss Federal Institute of Technology at Lucane also spoke at the session. He's presently responsible for a Swiss PTT X.400 project. Although it was the title of his talk, he confessed there really is no "Europeanwide view on EDI," that EDI is still a constellation of independent countries, customs barriers, and complex documents. He sees a large commitment to EDIFACT, including support by government agencies, and predicts that countries not ready for EDI will accept the X.400 Message Handling Standard (MHS). Migration to EDIFACT will not be difficult, according to the Swiss engineer, because it has a syntax, design rules and data elements similar to earlier formats, and the software is easier to build.

Genilloud said that X.400 can be used for EDI now but that an alias is needed to translate the EDI address into an X.400 address; he noted that a simple interface program can be written for this. He also said that access to Telex, possible with X.400, is important for companies and countries who are not ready for the MHS. However, according to Genilloud, there is presently no existing user interface at the envelope level to use the X.400 envelope directly and to interface directly with an EDI package.

Concluding, Genilloud said that EDIFACT will be used for international trade and is being used in trial now. Overall, X.400 is being seen as an important EDI communications method in Europe.

Steve Kirchoff, Corporate Manager of Electronic Mail at Digital Equipment Corporation said he takes the definition of Electronic Mail as being broader than interpersonal messaging, that quite often E-mail includes the movement of text, compound documents, FAX, graphics, images, and voice mail, which are all under the definition. Kirchoff reported the major benefit of X.400 as serving as the foundation for building a transport service moving multiple forms of information between entities.

Kirchoff said he thought banks will use X.400 as a backbone for moving information between corespondent banks, trading partners, and individuals and their checking accounts, among other applications. "The possibilities are unlimited with what X.400 has done with the architectural definition available today. In fact, you can define proprietary body parts yourself..."

Continued on Page 6

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The DEC E-mail manager reported his view that the EDI standard within X.400 is not that well defined and that the overall EDI group of standards will probably consolidate down to one, perhaps an EDIFACT X.400 standard.

Regarding the status of X.400 today, Kirchoff said, "I see X.400 as the basis for future application growth worldwide. I see EDI as an evolving application which will follow the X.400 standards, and over time, they will complement each other and come together."

Don Audsley, Director of Business Development, **Telecom Canada,** noted Canadian involvement in standards development and said, "We believe that EDI is probably the largest single application to really make full use of the X.400 facilities. We believe that the recommendations must be compatible with existing standards, but we don't see why the existing X.400 standards need to be changed to accommodate EDI. If that were the case, then you'd really be talking about a delay in the process [since the CCITT works in four year cycles]. We also believe there should be no modifications required in the current ANSI standards to enable any EDI activities to take place. Having said that...there's a requirement to have an ongoing look at EDI activity as it relates to X.400 to insure that it can be fitted into the X.400 series of standards from the marketing end and the service definition end, hopefully without any major technical changes."

Audsley was rather clear on Telecom Canada's view of X.400: "We support X.400 as the only long- and short-term reasonable method of interconnection. There is an alternative. Multiple network access would get the job done, but this will become less important as time goes on since once enough people are connected via X.400 a lot of the problems now found disappear from the user's point of view."

Audsley said that the key question from his point of view was one of timing. "We don't think there should be any restriction on the market due to lack of interconnection. We believe interconnection will have to take place within the next 12 to 18 months in North America. We resist the open mailbox approach because it competes with the logic of developing and using standards."

Audsley saw X.400 as being a means of keeping the competition in its place: **"I believe one of the best things to stop the major international players from playing in your own park is to use X.400 and keep them in their own place and talk to each other using the same set of standards."** He also felt that interconnection helps to create a **larger market.**

Marty Weiss, Executive Product Line Manager, EDI Services at **Western Union**, gave one of the more to-the-point presentations in the seminar, highlighting the fact that if there is going to be network interconnection, **a settlements process will be required** by which networks can share revenues for carrying traffic across several networks. This is what takes place in long-distance telephone service, and a similar clearinghouse for EDI traffic will be needed.

Weiss said the benefits of integrating EDI with E-mail on an X.400-based service include **improved network management**, standardized billing practices, standardized interconnection procedures, and expanded network reach. Internetworking capability among private and public networks will "build a critical mass of domestic and international companies that can be reached with EDI," said Weiss.

Weiss predicted that the adoption of X.400 with EDI will change the way the third-party networks do business by encouraging closer integration of office systems with E-mail and EDI messaging. "Third parties will become management domains serving the interests of users through translation software. These domains may represent industry networks or closed user groups that need to reach trading groups or other companies through alternative message transfer systems."

Comments: One wonders whether the EDI world is ready for another **X-rated standard.** The dust is still swirling over the migration plan of X12 to EDIFACT, although more appreciation of what this really means is developing.

The key thing to remember about **X.400 is that it will likely remain a third-party network issue and, to some extent, a large user private network issue.** Because of its attributes, it will also make possible compound documents (text, voice, data, image, even video) for those situations where proven business needs exist. It may be extreme speculation to envision a world in which full motion videos are delivered along with an invoice for a movie rental, but something along those lines may become possible with EDI/X.400. The key question at that point will be **"Does this technology have a meaningful application?"** ■

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Interview: Union Pacific Technologies

Several months ago, we were surprised to learn that the technology spin-off of the Union Pacific Railroad intended to pursue the broader EDI market and not limit itself to customers of the railroad. This month, we present an interview with a member of the staff about the company's strategies.

First, some background.

When the Union Pacific Railroad merged with the Missouri Pacific Railroad, there were two separate IS staffs. Last spring, some four years later, the groups were merged forming a separate company, Union Pacific Technologies (UPT), to work for all operating companies of Union Pacific Corp. and also to pursue customers for commercial services.

UPT has been heavily involved in IS projects for other rails to provide various logistics and business processing needs. From this basis now comes a run at EDI.

Thomas Doussard is a business systems consultant with UPT. He spoke with Vic Wheatman.

VW: In terms of what we define as EDI, what do you offer?

TD: We see ourselves as a direct competitor to TranSettlements or Kleinschmidt. We can handle any EDI data and pass it on to the next party as a third-party service.

VW: Only in transportation areas?

TD: Not necessarily. We don't want to limit ourselves to transportation. We could be a value added network doing a translation for a customer, or provide some other types of services such as data base maintenance. True, we are particularly well equipped in a logistics/transportation-oriented service because we know the industry, but we're not going to limit ourselves.

VW: Are you also competing with Railinc?

TD: Yes.

VW: Railinc has the Train II network. What kind of network do you have to offer?

TD: Dial-up, or we'll set up direct customer connections, or we'll let a customer get to us through other third parties, be it GEIS or Railinc.

We have a shipment monitoring system which, through a few levels of service, monitors shipments across multimodal means of transportation, collecting Car Location Messages (CLM) and which can conceivably marry those to a bill of lading that a customer would initiate with us.

We can act as a customers agent with other railroads, collecting all their CLMs. Soon, we're going to look at putting the shipment status messages from truck lines and what not into a data base and be able to monitor against a standard [regarding] what the customer has set up in contracts with other railroads. We'll monitor performance in terms of how well a railroad is meeting its contracts. If things get off sync, we'll proactively monitor, call the railroad up to beat on them to get them back on schedule. We're planning a couple of different levels of this service.

VW: Will you be providing services in both the U.S. and Canada?

TD: As far as shipment monitoring, it will be whoever is producing CLMs.

VW: Has any position been established in terms of interconnection with Kleinschmidt or Trasettlements?

TD: We will gladly connect to them if we need to get information from them or funnel information to them for a client. In that case, we'll set up direct connections.

VW: What standards will you support?

TD: TDCC, X12, CLM/NITL....

Comment: Union Pacific Technologies has about 160 people in all and is developing a marketing staff to go after new business. ■

EDI Quotes:

"Today, jobs are defined by the amount of paper employees can handle. Employees tend to focus on processing paper rather than on the business objectives of the company. This narrow scope often makes for boring jobs and limits personal opportunities. The paperless office, on the other hand, expands job content because employees process information. Job content can be enhanced and responsibilities can be broadened."

-Jim Oravec, AIAG Associate Director, speaking at the International Seminar on Automotive Industry EDI in Seoul, South Korea, as reported in AIAG *Actionline*. ■

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INPUT Presents Research Conference on EDI

INPUT, the leading EDI market research firm and publisher of this newsletter, will present an executive-level research-oriented conference on EDI titled **EDI INTERTRENDS: INTEGRATION, INTERNETWORK, AND INTERNATIONALIZATION** at San Francisco's Mark Hopkins Hotel on July 28-29.

Seldom has an information services application caught on with the intensity of EDI—the computer-to-computer exchange of data representing business transactions. In some industries, EDI has become a requirement for business. In others it is the "competitive advantage" improving customer service, speeding turnaround, reducing costs, and cutting expensive errors.

We're still early in the EDI age, but many are getting beyond the basic question "What Is EDI?" to ask "What *Else* Is EDI?" This conference will address this question through interactive sessions with the leading users, vendors, and observers in the industry.

Among the sessions planned are:

- ***EDI Services and Software Intertrends.*** Presented by Victor S. Wheatman, EDI Planning Services Manager, INPUT. New survey results will be presented regarding user concerns, vendor strategies, market shares, market forecasts, and future directions in EDI including EDI/graphics, internetworking, integration, and internationalization.

- ***DEC and IBM —EDI Style.*** In what will surely be a conference highlight, these two titans of the information age will describe their own use of EDI, and their market strategies from multiple perspectives: software integration, computer equipment networking, network services, professional services, international EDI. **DEC has indicated it may use this forum to make the first public announcement of its EDI strategy.** Presenting will be Mike Ribet, Manager, Interorganizations Systems/EDI—Marketing, IBM Information Network and William Carlisle, EDI Marketing Manager for Digital Equipment Corporation.

- ***EDI Service Round Table: Network Intertrends.*** An interactive session with competitors answering hard questions on internetworking, global support, integration support services, etc.

- ***Late to the Party or Just in Time?*** New service entrants discuss their strategies for offering needed user services and features in an increasingly crowded marketplace. Representatives from CompuServe, Western Union, Telenet and ADP are being invited to participate.

- ***Software Provider Round Table: What's New and Different?*** Leading and innovative companies in EDI translation software are being invited to participate and address conference themes.

- ***Real Life User Case Studies.*** Leading users discuss problems met and addressed, vendor selection criteria, integration directions, and more. To date, Mervyns, VWR (scientific products), and Advanced Micro Devices have accepted our invitations to speak. We're working on other users in warehousing, petrochemicals, and auto manufacturing.

- ***Insurance Interface EDI.*** With IVANS President, Bob Barham. There's been a bit of activity in this industry over the IIR/ACORD format for standardized electronic insurance interchange. Barham will report on the issues involved, possible links between "mainline EDI" and Interface EDI, and the role of IVANS.

- ***Global EDI and the X.400 Standard.*** INPUT's Principal Consultant Alex Graham discusses the role the X.400 message-handling standard may come to play in EDI.

- ***Federal Government EDI Intertrends.*** Jim Kerrigan, Senior Consultant, INPUT, Washington, D.C., presents and updates the findings of INPUT's market study on EDI projects and potentials in the federal marketplace.

SPECIAL EVENT: At the close of the first day's session, participants are invited to enjoy a **SAN FRANCISCO BAY DINNER CRUISE** aboard the yacht *Hornblower*. Last year's cruise was called "transcendental." Join us!

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■

News Bits

David Foster, Vice-President of Intercompany Worldwide Logistics at **GE Information Services**, has been lured to a lucrative equity position opportunity with office automation company CPT International in Minneapolis by a former co-worker. Foster has been heading GEIS' EDI effort since its inception in late 1985. **Sue Cole**, Manager, Central Area, from GEIS' Chicago office has been named as his replacement. Ms. Cole has been on the sales force for several years and is described as "dynamic and enthusiastic."

Automated Marketplace Systems, the holding company for **Industrial Network Systems** (Maumee, Ohio), has closed its Clark (NJ) office, consolidating operations in Ohio. In business for about six years, the company focuses on MRO (Materials Required for Operations) purchasing functions rather than production-oriented purchasing. The company started as part of RCA. When GE purchased RCA, it opted not to include INS/AMS in its portfolio. Instead, a venture-capital firm helped liberate the unit as an independent entity. **Paul Lanski** is new President.

The second edition of *EDI Yellow Pages* is available free to purchasing and traffic managers, or for $22.45 (includes postage and handling) for others. Send EDI, Spread the Word your EDI information to add your name to the 3,600 listings for next edition. EDI, Spread the Word (what a name!) is at 13805 Wooded Creek Drive, Suite 100, Dallas, TX 75244.

International News Bits

CNCP Telecommunications, called "the Western Union of Canada," is **scheduled to announce an EDI service jointly with EDS of Canada** this month. The deal will bring up hundreds of GM of Canada suppliers on a commercial service in one swoop. Details in our next issue.

Austria's Electronic Commercial Data Exchange (ECODEX) has started commercial activities, using the West German SEDAS format and IBM's European network.

Hard Copy Communications
(Letters to the Editor)

Just a note to tell you how impressed I am with your newsletter. *The EDI Reporter* is by far the best newsletter in print.

- Warner C. Blow, President, Information Services Group, Sterling Software

This is to tell you I am back to my University after being in the USA for five months at the University of Minnesota. Let me express my thanks to you for the very valuable information about EDI activities. After I returned I showed the documentation to a number of companies and prepared a paper for a conference on information systems. It will take some time to disseminate the idea. Pressure for the action will come from developments in the European Common Market and the expected state of standardization in 1992. Thank you for your cooperation.

- Jose Cricar, Chair, Information Systems, Univerza V Mariboru, Presernova, Yugoslavia.

Minitorial

Frankly, we find it objectionable that after its free trial subscription period, another EDI newsletter is sending out a "Continuation Notice" that looks just like an invoice. In many cases, those receiving the free trial didn't ask for it. The publisher is apparently banking on many companies routinely paying what looks like a legitimate bill. Don't be misled. We suggest you discourage this practice by subscribing or renewing with another EDI newsletter, preferably ours!

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EDI Events

May 11-13, Twin Bridges Marriott, Washington, DC. Principles of EDI, EDI Education, Inc. (312) 848-0135.

May 12-13, Scottsdale, AZ. UCS/WINS/VICS User Group Meeting. (513) 435-3870.

May 16-20, 1988, Pheasant Run Resort, St. Charles, IL. ANSI X12 Committee. (703) 548-7005.

May 17, Holiday Inn, Airport, Indianapolis, IN. ASSG EDI Support Group Meeting, sponsored by AIAG. (313) 569-6262.

May 18, New York, NY.
Introduction to Uniform Product Code and EDI, National Retail Merchants Association. (212) 563-5113.

May 19, Holiday Inn, Des Plaines, IL. ASSG EDI Support Group Meeting, sponsored by AIAG. (313) 569-6262.

May 19-20, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

May 24, Holiday Inn, Strongsville, O. ASSG EDI Support Group Meeting, sponsored by AIAG.
(313) 569-6262.

May 24-26, Columbus, OH. Exchange '88, Sterling Software Ordernet, Eagle, Comm-Net User Group Meeting. (614) 459-7501.

May 25, Fairlane Manor, Dearborn, MI. ASSG EDI Support Group Meeting, sponsored by AIAG.
(313) 569-6262.

May 25-27, Constellation Hotel, Toronto Principles of EDI, EDI Education, Inc. (312) 848-0135.

May 26, National Bureau of Standards, Gaithersburg, MD. EDI—Bringing It Together in Government.
(301) 975-3376.

June 1-3, New York Hilton Hotel. International Trade and Computerization Exhibition, sponsored by the National Council on International Trade Documentation. (212) 925-1400. **INPUT will participate in a session on EDI in the Pacific Basin.**

June 1-3, Constellation Hotel, Toronto. Principles of EDI, EDI Education, Inc. (312) 848-0135.

June 6-7, Detroit. ANSI X12 International Project Team Meeting, hosted by AIAG. (313) 569-6262.

June 15-17, University of Wisconsin-Madison Management Institute. How to Manage Traffic the EDI Paperless Way. (608) 262-4856.

June 15-17, Newark, NJ. Principles of EDI, EDI Education, Inc.
(312) 848-0135.

June 22-23, Crown Plaza, College Park, GA (Atlanta Airport). EDI Workshop, sponsored by TranSettlements.
(404) 996-8109.

June 28-30, Detroit, MI. Principles of EDI, EDI Education, Inc.
(312) 848-0135.

July 13-15, Marriott Hotel, Santa Clara, CA. Principles of EDI, EDI Education, Inc. (312) 848-0135.

July 28-29, Mark Hopkins Hotel, San Francisco. ELECTRONIC DATA INTERTRENDS, INPUT's 1988 EDI Conference, focusing on **integration, interconnection and internationalization.** INPUT's analysts and guest speakers will present forecasts, survey results, new and continuing vendor round tables, industry clearinghouses, and user case studies. Also: a cruise around San Francisco Bay, food, beverages, and more.

July 28-29, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

August 8-12, Hyatt Regency in Peachtree Center, Atlanta, GA. ANSI X12 Meeting. (703) 548-7005.

August 25-26, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

August 30-31, location to be announced. X12 International Project Team Meeting. (703) 548-7005.

September 12-16, Geneva, Switzerland. United Nations Working Party on Facilitation of International Trade Procedures meeting. (703) 548-7005.

September 19-23, Stuttgart, Germany. Combined U.S./European X12 International Project Team Semiannual Meeting. (703) 548-7005.

September 29-30, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session.
(202) 293-5514.

October 13, Washington, DC. UCS Orientation Seminar. (513) 435-3870.

October 20-21, Convention Centre, Toronto EDI Council of Canada Forum. (416) 621-7160.

October 27-28, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

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November 1-2, Queen Elizabeth II Conference Center, London. EDI '88—the U.K. Conference on Paperless Trade, produced by Queensdale Exhibitions. (01)-727-1929.

November 3, Kansas City, MO. UCS Orientation Seminar. (513) 435-3870.

November 14-18, Hyatt, Los Angeles Airport. ANSI X12 Meeting. (703) 548-7005.

November 15-17, InfoMart Center, Dallas, TX. TransComp '88, Information Technology for Transportation and Distribution, sponsored by the National Industrial Transportation League. (202) 842-3870.

November 17-19, Twin Bridges Marriott Hotel, Arlington, VA. TDCC/EDIA Training Session. (202) 293-5514.

November 22-24, Rome (tentative) Second Annual EDI Italia Conference.

December 13-14, Washington Hilton Hotel, Washington, DC. EDI—Perspective '88, sponsored by TDCC/EDIA. (202) 293-5514. **Peter A. Cunningham, President of INPUT, will present on the topic "EDI—Myths and Realities," December 14.**

1989

February 13-17, location to be announced. ANSI X12 Meeting. (703) 548-7005.

April 12-13, Hilton Hotel and Towers, New Orleans. ANSI X12 '89 Seminar.

May 15-19, Detroit, MI. ANSI X12 Meeting. (703) 548-7005.

August 14-18, Boston, MA. ANSI X12 Meeting. (703) 548-7005.

November 13-17, San Francisco or San Diego, CA. ANSI X12 Meeting. (703) 548-7005.

Next Month:

Apple Getting into EDI

GEIS' President Tony Craig on EDI

Mortgage Banking into EDI

Interview: Data Designs

More Details on INPUT's Research Conference

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EDI Reporter In flat Drawer

June 88

Vol. 3 No. 2 February, 1988

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- McCormack and Dodge Adds EDI to Millennium
- Feature: International EDI
- EDI in Japan

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The winner in this development is Ordernet. "This reconfirms our long-standing commitment to the development of a strong EDI trading community in Canada, where we have had a pioneering presence since 1983," said Ordernet president William Plumb. The deal will potentially add nearly 50 accounts to Ordernet's present 60 in Canada.

Crowntek has the dubious distinction of being one of the few to drop out of EDI services, with AT&T being the first after disbanding Net 1000 and cancelling its Information Interchange service several years ago. However, AT&T remains active in EDI, which AT&T has wrapped into the Electronic Order Exchange marketing concept, and provides Control Data's Redi* Access networking, among other involvements (see story on LeviLink).

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"Long term, certainly we see there's going to be continued growth in EDI services. For someone who is already in it, made the investment, and reached break-even, they should see growth. But for us, it has taken longer than expected. It was fairly easy for us to go into it because it was an add-on to our main processing business. **We probably could have kept it going if we really skinnied back on the support resources we were putting into it, but that's really not our style."**

Observers familiar with Crowntek indicate **the problem might have been that the company is driven by technology rather than marketing.**

Since July, 1987, Ordernet's services have been sold in Canada through **Management Horizons Data Systems, a division of Computer Horizons (Canada) Ltd.** under a resale agreement. Also in mid-1987, **Telenet** signed with Ordernet to private label and resell services to its Fortune 500 customers.

AT&T TO WORK WITH LEVI-STRAUSS' EDI

AT&T will work with apparel manufacturer Levi-Strauss (San Francisco), thus supplementing a relationship Levi has with GE Information Services to develop turnkey systems and possibly network services. This working agreement will extend the reach of Levi's EDI and inventory management services — known collectively as LeviLink — to small and midsized retailers.

GEIS maintains the majority of Levi's EDI network business with larger retailers.

The new addition is called **RIVET** (for **Retailers Inventory Valuation and EDI Transmission** program). AT&T will provide equipment for the up-to-200 retailers expected to use the system by 1989. Although the EDI capability is built in, the focus is on store operations. RIVET handles inventory control, accounting, purchasing, and sales analysis. Further, and perhaps key, RIVET will take scanned POS information from preticketed items, work that against inventory, and in effect **drive manufacturing from purchasing information** derived through electronic cash registers. In other words, if purple paisley blue jeans are hot sellers in Podunk, more will be ordered, manufactured, shipped, and stocked before inventory is depleted and before the fad fades.

"The way we structured the deal" says **Levi's Paul Benchner,** "is that it is a turnkey system which includes whatever networking that may be required, but whoever purchases the package is not required to send or receive data. They can just use it to run their store, without EDI. We did want to build in EDI capability if they're interested. If they are, at least initially, it would be through AT&T's network." However, Benchner added, retailers could choose another network once the service is up and running.

Levi manages some 80 facilities worldwide and deals with over 200 thousand stores. Its EDI is a function of the marketing group. The company's EDI experience will be described in detail in an upcoming INPUT research report, *EDI Implementation Case Studies.*

McCORMACK & DODGE INTERFACES WITH GE INFORMATION SERVICES

Last month, **McCormack and Dodge (Natick, MA) became one of the few "major" software companies with an EDI position.** It will work with **GEIS** on interfaces between its software and GEIS' EDI*T translator package, and will evaluate opportunities to jointly sell EDI products and services. The next version of M&D's Millennium Purchase Order will have EDI functionality.

Dave Foster, Vice President and General Manager for GEIS' Intercompany and Logistics Businesses, said, "The development of interfaces...should enable M&D customers to capitalize on the benefits of EDI more quickly and at less cost by eliminating the need for in-house development..." M&D, owned by Dunn and Bradstreet, has over 7,500 systems installed worldwide, and is represented in over half of the Fortune 500.

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INTERNATIONAL EDI: 147% GROWTH THROUGH 1992

EDIFACT has a lot of support in Europe and we definitely want to encourage that development. We're going to do whatever we can do as a company to make it happen."

The speaker, **Bruce Alexander, EDI Project Manager with Advanced Micro Devices** (Cupertino, CA), represents an attitude common among EDI activists, a commitment of resources to make EDI work for the company and for the community of interest. He's talking about the evolving international standard EDIFACT (EDI for Administration, Commerce, and Transport).

Approximately 30 U.S. industries are now using or piloting EDI implementations domestically. INPUT sizes the overall 1987 market as between $75 million and $90 million for network/processing services, software, and professional services, a figure to be finalized in an upcoming market study.

Internally developed applications in support of international trade are paving the way for international EDI. **Nike International,** a division of the Beaverton (Oregon) sneaker and clothing manufacturer, is using Sperry's Mapper 4GL for a number of things, including an export document application that is forming the test-bed for future EDI usage. According to **Barney Foster, Mapper Support Manager and International E-mail Manager,** the custom-developed program downloads mainframe and PC extracts into departmental PCs for massaging, and then sends them as raw data files through GE Information Service's Quik-Comm E-mail to other divisions, freight carriers, and trading partners in seven European and four Far Eastern nations. There, data is manipulated by end-user departments into usable formats covering production schedules, projected delivery dates, shipping notices, and similar information. Admittedly, **this is not true EDI, but it's close** and offers the same benefits, which Nike summarizes in two words: "speed and accuracy," a strategic, but nonquantified benefit that means having the information quickly and without error.

According to **Jeff Edgemond, Nike's Manager of Data Communications,** true EDI, both domestically and internationally, remains in the company's future, but its experience in international E-mail is presumedly a precursor of things to come. Mr. Foster thinks EDI will happen at Nike, but will probably be driven by end-user advocacy, rather than IS, which sees its role as supporting departmental needs.

INPUT expects U.S. user expenditures for international EDI to grow from their current low use of approximately $2.5 million to $220 million by 1992, for an average annual growth rate of 147%, according to a new study, *International EDI Services.*

That a currently small market should grow so rapidly is not surprising, but **there are reasons for such a dramatic increase** not related to the nascent nature of the market: the growing importance and complexity of international trade, increased attention to global competition, added costs caused by delayed or error-ridden documentation, losses from document fraud, national policy considerations related to the trade deficit, and government agency requirements for trade statistics.

Costly Documents, Complicated Interfaces

Consider that **the cost of international trade documentation to U.S. shippers is estimated at $8 billion annually,** and $40 billion worldwide, representing some 7 billion original trade documents plus copies each year. This paperwork alone is a compelling reason to use international EDI.

Now **consider how complicated the process is:** in addition to the primary trading partners there are transportation carriers, freight forwarders, agents, customs agencies, banks, insurers, and governmental bodies. These parties often reuse at least some of the data originally entered by another party. The implied complicated procedures and policies are ripe for operational improvements. **Lee Foote, EDI Manager of E. I. DuPont DeNemours & Company** (Wilmington, DE), speaking at a recent seminar on International EDI, described the magnitude of the problem: "On a typical day, DuPont exports 200 shipments originating from many commercial centers within the company. People working on documentation supporting these include about 200 in DuPont, 75 in forwarders' offices, and 70 in DuPont's overseas subsidiaries. Our forwarders generate two thousand telex messages, and a total of 30 thousand pages of related information are produced daily. **The cost of handling this information? Seventy-five thousand dollars daily or $20 million annually to produce and store a literal mountain of paper."**

Impediments

There are impediments to reducing this mountain of paper, largely in the need to get systems and people

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ready for EDI. **EDI can serve as a catalyst for operational improvements throughout a company,** but for many companies such improvements need to start with the initial automation of processes and procedures that are still paper- and people-intensive.

DuPont's solution is called XT or "Export-Trrims" for (Transportation Rate/Route Information System). Export rating, routing, payment, and shipment information files among other modules. The online, menu driven package, developed by SID, Inc. calculates forwarder and carrier charges for shipments by using tariff rules. With information provided by the material and logistics department, and with shipment specifications, the system presents available routings, including carriers, exit ports, and types of services available. Inquiries can be made based on various parameters such as export control numbers and hazardous material controls. The system also audits for duplicate shipment payments. Compatible with other corporate applications, XT is credited as enhancing the company's competitive position in the global marketplace.

As fancy and as complicated as XT sounds, the technologies associated with EDI are not cutting edge. EDI uses data processing and communications techniques that have been in place for years. However, users *have* been confused by EDI standards.

Migrating, Converging, and Jelling Standards

The U.S. has a handful of industry-specific EDI formats being used in grocery, pharmaceuticals, and other segments. On an international level, the standard known as EDIFACT is showing promise, although few transaction sets (representing electronic equivalents of paper documents) are currently available. Domestically, there is movement toward a common ANSI X12 standard, which will be (eventually) migrating toward EDIFACT. But the few "official" standard formats used in other countries (notably Tradacoms in Europe) will also need to converge with EDIFACT for IEDI to jell on a widescale basis. There is preliminary evidence that this jelling is occurring, with the European automaker organization ODETTE (for Organization for Data Exchange by Tele-Transmission in Europe) in transition to the EDIFACT syntax.

More Problems

There are other problems. **Several international trade participants are developing information systems that are not compatible with EDI's dominant trends** and thus impede IEDI optimization by users. For example, the **U.S. Customs Agency's Automated Commercial System,** and the **Commerce Department's Census Bureau data collection processes,** both with international trade information needs, **are not compatible** with each other, or with most EDI standards. Internationally, automated port systems are often incompatible, and EDI systems within various countries often use data standards and communications methods out of synch with other national systems.

Also impeding IEDI optimization are Transborder Data Flow (TDF) issues that inhibit the transfer of business data. For Nike, however, transferal has not proven to be a problem, although Foster is aware that data sent to Korea is monitored. More complicated is installing equipment (such as modems) that are often only available through the Post, Telephone, and Telegraph (PTT) monopolies. Making equipment and circuit arrangements may take some time.

TDF issues surface in several ways. Foreign governments often require that data originating within a country be processed in that country to protect evolving information service industries, and also due to privacy considerations. **PTTs in many countries have been resistant to change, and particularly toward technologies that may reduce their profitable telex revenues.** Monopolistic and often technologically backward, PTTs have placed restrictions on how leased lines can be used by multinational corporations (MNCs), with pricing designed to encourage the use of public networks, which may not be the most economical for data applications. Also, MNCs are usually prohibited from reselling excess capacity on the leased circuits they are allowed, and thus from running the risk of having their networks pulled out from under them if they allow another company to transport data. Since EDI is (by definition) intercompany, this prohibition is a serious impediment.

There are also business and cultural impediments, such as an unwillingness to accept changes in the ways companies do business, which EDI represents. Reducing costs often means reducing the clerical staffs that now process the mountains of paper supporting international trade. Labor unions see EDI as a threat to their members.

For users, these technical, business, political, and personnel complexities currently tend to limit the benefits of systems designed to facilitate trade.

Completing the Jigsaw Puzzle

Despite these obstacles, pieces of the IEDI puzzle are fitting together. The U.S. business environment is in the

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first stages of what promises to be widescale IEDI use. EDI use within certain regions (notably Canada, Western Europe, and Japan — see below) is also growing. **Third-party EDI networks** (most notably GE Information Services' Trade*Express, and to some extent IBM's Information Network) are **targeting multinational companies and international traders** as clients who will benefit from IEDI services. Banks such as Chase Manhattan and Irving Trust, working through their trading companies, are getting involved with electronic bills of lading and letters of credit services.

International data standards for EDI, and its application cousin Electronic Mail, are being developed to address IEDI functionality. The latest proposed enhancements of the X.400 international E-mail standard contains features directly addressing EDI functions. **Software supporting international EDI standards is just becoming available now that the International Standards Organization (ISO) has approved the underlying syntax.**

Advanced Micro Devices is in the preliminary stages of a pilot international EDI test with a European distributor, but using a proprietary format. Bruce Alexander says, "Being a sales organization, the benefits I see are making it easier for customers to do business with us. That's our motivating factor. **Being able to actually increase sales is the purpose behind it."**

Although AMD is now using a private format for its test, AMD will use the evolving international standard: "The intention is to migrate to EDIFACT," Alexander said . "Eventually we'd like to get to the point where we can set up on one standard and have all the people we sell to use it."

Third Parties Bridge the Gaps

The existence of technological incompatibilities and difficult business issues underscores the need for third parties with software, processing, network, and professional service expertise to bring the pieces of the IEDI puzzle together in a seamless mosaic and assist users in successfully implementing and productively using IEDI techniques. Addressing the personnel issues, however, may not be so easy. They are best approached by forming a task force within the company to get affected users in order processing, finance, marketing, operations, and information systems to buy into the EDI solution. Political issues in countries where MNCs trade are best addressed by third-party vendors, and by lobbying to reduce or minimize the negative impacts of restrictive data policies.

Third-party service providers are taking a variety of approaches to the IEDI market. For example, **GE Information Services** works through international subsidiaries and affiliates and has demonstrated an alliance strategy. Domestically, it has vertical-market software companies as EDI agents, and a relationship with a money center bank for international financial transactions. In the United Kingdom, GEIS has formed a joint venture with another EDI service provider, and will likely enter other partnering relationships to further develop its international capabilities. The international EDI service, called Trade*Express, features a workstation that incorporates a variety of international trade applications. This spring, the GEIS EDI*T translator software (which converts internal data formats to EDI-formatted data) will add the EDIFACT syntax and transaction sets to its current support of X12 and other standards.

IBM has expanded the reach of its international data network by linking several regional facilities, and has entered relationships with overseas information services companies. Its strategy is to first concentrate on IBM suppliers, with the plan that once supplers are introduced to EDI, additional use will follow. So far, however, Big Blue has yet to use EDI for its own international needs. Its import/export operation out of Boulder, Colorado uses various forms of Electronic Mail for these activities. But this use will change. As we reported last month, **Edward Lucente, Vice President, Information Systems Group,** recently noted that worldwide, some 37 IBM manufacturing facilities spend $14 billion per year on purchases from 72 thousand suppliers, with over 1 million purchase orders per year. He said that by 1991, over 2,000 of IBM's largest suppliers — representing 80% of IBM's production — will be using EDI via the IBM Information network. Lucente also reported that an international project office is being established at the Tampa Information Network headquarters to develop a uniform architecture for IBM's worldwide networking.

For now, multinational corporations have few options for IEDI, basically because the market is so new. Multinationals can implement IEDI on a closed, private-network, or leased-line basis, but they may run certain risks (described above) with regard to transborder data flow restrictions and will have problems managing a network with more than just a few trading partners. But relief is coming.

EDI service vendors are developing strategies for IEDI for two fundamental reasons: their largest MNC clients will require IEDI and it, reflects a service provider's "full-serv-

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ice" approach in the marketplace. **Vendors will probably address the international market through a variety of partnering relationships** — with banks, particularly those with trade services; with accounting firms developing systems for multinationals' trading activities; with software providers selling to international trading customers, and even with large users who may have valued expertise in international telecommunications and can partner with the commercial services for mutual benefits.

What to Do? "Do It!"

So what should MNCs looking at IEDI do about all this? DuPont's Foote warns that **"the only real barrier to using computer technology to be more effective and competitive in international business is our own inertia."** His solution is rather simple: **"Do it."**

Beyond the simplistic are simple steps to getting started. For both domestic and international EDI, **users should avoid "reinventing the wheel."** EDI services and software are available from well-established remote computing services and value-added networks. If your vendor of choice cannot help, there are others willing to take its place. By working with these providers, or with a growing number of EDI professional service firms, on any unique needs, the development process can be truncated, with the benefits realized sooner than with purely internal development.

Large users also have a responsibility beyond the immediate business need for IEDI. They should also work on the problems presented by transnational data flow restrictions. Large users need to monitor actions related to data restrictions and must audit their own practices. Companies should participate in the appropriate international bodies, such as the newly formed North American International EDI Users' Group, and with trade facilitation councils to represent user and service provider concerns. Naturally, users must evaluate how to focus resources where the resources will do the most good.

In countries where data flows take place, a case needs to be made that such activities generate revenue and jobs for that economy. To move forward the technology and the possible benefits lobbying for relief from data flow restrictions is needed in a spirit of cooperation with the regulating nations,

Based solely on trade documentation costs, IEDI represents a significant opportunity, but cost avoidance is not the only reason for its adoption. U.S. businesses are increasingly competing on an international scale; that is, selling products and services and sourcing materials on a global basis.

While international trade, despite the best efforts of advocates in the public and private sectors, largely remains a quagmire of paperwork, rules, regulations, interagency reviews, restrictions, shipping rates, control lists, and special cases, computerization is helping and IEDI will undoubtedly be part of the new world trade landscape.

NOTE: This article is based on INPUT's new study, *International EDI Services*. For information about the report, contact any of our offices listed on the back page.

EDI IN JAPAN

The group working on an international EDI standard **(UNJEDI)** reports their rapporteurs are in Japan, Hong Kong, and Taiwan this month working on establishing a UNJEDI Regional Body in the Pacific Rim.

According to INPUT's Japanese representative, Tetsuo Imai of the Future Knowledge Institute: Although the concept of EDI is included in VAN developments, the terminology has yet to be recognized, and no standards are in place. Of the approximately 350 VAN services that have developed in Japan since the deregulation of telecommunications, approximately half have EDI or EDI-like functions. Individual transportation companies, a hospital and medical supply cooperative, and representatives in textiles, food, auto, and steel are using EDI, in fact if not by name. **The best-known service is Nippon Telephone and Telegraph's Dendenkosha Real-time Sales Management System (DRESS),** which is used by Yamaha, Kokuyo (stationary and office equipment), Kao (household supplies), Tohan (booksellers), and others.

American President Companies (Oakland, CA) is using its Pacific Basin network in support of international EDI (IEDI) for at least one Japanese customer. According to **APC's Director of Marketing Services, Robert Marcus,** who spoke at INPUT's EDI conference several months ago, a Japanese automaker that assembles cars in North America receives transportation and logistics data from APC to support its Just-In-Time processes. Containers with materials for assembly are tracked at every stage of shipment

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and transmitted twice daily in EDI formats from APC's California data center to the automaker's Tokyo data center via APC's private network.

STERLING SOFTWARE'S ORDERNET - UP 45%.

Sterling Software's Ordernet Services **President William Plumb,** writing in the company's newsletter, reports that for fiscal year 1987 (ending September 30), Ordernet enjoyed a **45% revenue growth over 1986,** continuing a pattern since it started EDI services in 1978. The rate includes 60% growth in new contracts, 65% growth in live installs and a 25% increase in actual EDI use by customers. Ordernet has operated profitably since inception.

EDI and X.400 Seminar

Getting depressed by winter's chill? Head to the Sunshine State March 3 for what promises to be a forward-looking seminar sponsored by the Electronic Mail Association. **EDI and the X.400 Messaging Standards** will feature X.400 guru Ted Myer of Telenet; views from the U.S., Canada, and Europe; and presentations from Tymnet, Digital Equipment Corporation, Telecom Canada, GE Information Services, Western Union, AT&T, CompuServe, and INPUT.

EMA, sponsor of the event at the **Hollywood Beach Hilton Hotel** (near Ft. Lauderdale), notes "The X.400 standards... provide an excellent prospective vehicle for the distribution of EDI documents." The seminar fee is $175 or $25 for EMA members. Call (202) 293-7808, or send E-Mail for registration.

BCG and ISI: "DEC-MATES"

As reported in our last issue, **Digital Equipment Corporation** exhibited for the first time at the December TDCC/EDIA forum. Two software companies displayed with DEC: **Birmingham Computer Group** (Birmingham, MI) and **Interchange Systems Inc.** (Lexington, MA). INPUT talked with the presidents of these two companies about their products, gained their companies' perspectives on the market, and sought to understand their relationships with DEC.

Charles Townsend, Birmingham Computer Group, was interviewed at the EDIA forum as reported below. Next month, this newsletter will present an interview with **ISI's Carl Drisko.**

VW: You seem to be participating more visibly in the EDI marketplace than in the past.

CT: In the past we were doing a lot of heavy-duty software development. Now we have it positioned the way we want it, and we've designed the software so it can be moved between computer platforms — from MS DOS into the HP 3000 and DEC VAX environments. We've made some technical innovations in order to support it in all those environments.

VW: I noticed that your name is prominently displayed at the DEC booth. Is this a joint-marketing arrangement?

CT: Our marketing agreement is actually with ASK (Mountain View, CA), but we are going through the steps to become certified by DEC. We do have a joint-marketing agreement with Hewlett-Packard. We made an arrangement with DEC in the fall. They were very interested in getting into the automotive EDI market. We were also in their booth at the Autofact show in Detroit. In that case, our software was linked to the ASK manufacturing module and we displayed with them.

VW: Will you continue targeting the automotive industry?

CT: No. Our latest software is table driven, and we can support any transaction set: TDCC, WINS, UCS — as well as AIAG X12. Our tables are very flexible. We have a separate table that displays data to the screen. In doing this, we feel we are helping operator input. On a CRT screen, you have two types of fields: a literal field, which is something written on the screen, and a variable input field, which is where you input data. When we design a screen layout we have a table that gives us both types of fields. You can display literals the operator recognizes, but store data and other literals inside the software where the user at the other end would need it.

For example, the user may want the invoice number sent through a transaction set that the operator recognizes as the order number. Therefore, you want the screen to prompt for that number so you can develop consistency among all your trading partners for the operator's convenience. Also, different trading partners want different subsets of information from the standards, so the screens can be designed so you're only inputting data that the operator wants, and you're not wasting time gathering data that others may not need.

Another way of doing this is to build our application behind a user application such as ASK's. We can have our screen prompt from behind (for example) the shipping screen so it will display the information that's already in it and indicate what addi-

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tional information is needed. In this way, ASK does not need to change their application but they just need to interface it to our advanced shipping notice input application. We consider this to be extremely operator friendly, because the operator now is only putting in exactly the information needed. We've seen examples where Ford requires the number of shipping containers to be put at the line level, while GM requires it at the truck level. A lot of software packages will ask the operator to input the number of containers at the line level and will simply add them up for the truck level at GM. But those only shipping to GM don't want to input the extra data at the line level; they'd rather do it at the header level. This is a simple example of something that's really snowballing into a big problem. Our software is attempting to address this.

VW: What is your pricing?

CT: The micro ranges from $1,990 to $8,000, depending on what modules are included. On the HP 3000 and DEC VAX, we run from $5,500 to $25,000.

VW: That's quite a range.

CT: Well, we have quite a number of features you can chose. For example, we can provide source code. Also, for the auto industry where material releasing is prevalent, we find that order entry systems are very poor in handling material releasing, so we can provide an order entry module called Material Release Master Maintenance to maintain releases outside of a conventional order entry system. In this way, you have an additional module at an additional price. We also have add-on import/export capabilities to interface data directly into operational systems and we have a number of different data sets. For a user that wants only two or three transactions with one trading partner, it starts out at a basic price, but as they add on more data sets, the price goes up.

VW: Do you also provide integration assistance?

CT: Yes, we've provided quite a lot to our major clients. Off the shelf, the software produces flat files outbound so it can be integrated into someone else's software, but in the event the client doesn't want to integrate the software, they can buy a package such as ASK where the integration has already been performed, or we will provide integration services on a contractual basis.

NOTE: BCG has 450 applications now in use by approximately 120 different users.

NEWS BITS

Keynote speaker at the ANSI X12 EDI '88 Seminar, Changing the Way Business Is Done, **will be Bill Eaton, CIO at Levi Strauss.** The event is April 20-21 at the Hyatt Regency in San Francisco and is sponsored by the Data Interchange Standards Association (DISA).

A "suite" of implementation services are being offered by **GE Information Services (GEIS) in agreement with GE Consulting Services.** The new professional services assist in EDI integration with various applications. Additionally, MIS staff can be trained on standards, testing and documentation, and can be assisted in setting up trading partner conferences.

ACS Network Systems (Concord, CA) has expanded the communications interface of EDI/36 and EDI/38 software beyond the GEIS network to basically all EDI service providers. Versions of the package for other processors are also under development.

Standard Generalized Markup Language or **SGML** is being proposed by the **National Bureau of Standards** as a Federal Information Processing Standard. The standard would translate logical formats against physical formats and would allow users to send unformatted text between dissimilar systems for EDI and other applications. NBS believes such a standard is needed in the Federal Government.

INTERNATIONAL NEWS BITS

COST 306, the EEC-sponsored European shipping and trade documentation EDI project formed several years ago, moves from its demonstration phase into implementation, a process estimated to take two years.

ODETTE (for Organization for Data Exchange by Tele-Transmission in Europe), an organization of European automakers, has started a **transition program to international EDIFACT syntax,** in recognition of the need for automotive EDI users worldwide to have a common EDI "language."

More organizations are coming to the international EDI standards party. The newly formed **EDIFACT Board** is starting its work to develop and maintain international EDI messages. It's receiving support from the European Commission in Brussels. Also involved in setting up transaction formats are the UK EDI Association, a coalition of port associations, and the International Data Exchange Association (IDEA).

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Sooner or later, these organizations will need to synchronize their efforts.

The UK Trade Facilitation agency SITPRO has issued its third release of Spex PC software supporting the Single Administrative Document, which replaces several trade documents used among EC members. Spex 3 also supports the Harmonized System, an internationally developed nomenclature describing goods and services. The new nomenclature is now being implemented worldwide. The package is currently used by about 500 companies in six nations.

HARD COPY COMMUNICATIONS (Letters to the Editor)

Editor: This is a follow-up to inquire as to whether your report titled EDI Software Provider Profiles, has been corrected in its failure to represent Supply Tech as a "Full-Featured Generic EDI Software Vendor." Your report, which represents Supply Tech as providing "EDI Software from Application Vendors," tells only half the story.

Supply Tech has written two EDI packages: One for the Automotive Industry (ST1), which is not generic; and one that is completely generic (STX12) and far superior to what we have seen of our competition.

STX12 has several features that are so significant they deserve a special report. **We believe that STX12 is the most generic EDI software in the world, and we invite comparison.**

STX12 supports ANSI ASC X12 and TDCC transactions (all revision levels, all transactions, all transaction variations) in a combined way in a single copy of the software. Because of our President's efforts in reconciling ANSI ASC X12 and EDIFACT standards, we expect to handle the resultant international standards in STX12 in the same dynamic way.

INPUT's EDI report, as it stands, performs a disservice to Supply Tech and to INPUT's subscribers. INPUT appears to be generally well regarded by many corporations contemplating EDI; hence my attempt at correcting your report.

- Ted C. Annis, Chief Executive Officer

Answer: The referenced study (actually two: one on the X12 EDI software market, the other profiling vendors) segmented the market in three categories: generic EDI software companies that are generally start-ups (with some formed from consulting companies) and whose main business is a generic translator; VANS and RCS firms that sell EDI software; and established applications developers who have added EDI to existing software systems.

The report describes Supply Tech as being founded as a software development company, and evolving into a just-in-time software products house. This description was based on interviews with Supply Tech staff. In addition to EDI, the company has a bar code labeling product.

This classification system was meant as a convenient way of segmenting the market, and we don't believe the inclusion in any category is a comment, good or bad, on the company or its products.

The two studies will have updates, scheduled for publication this summer, that will consider Mr. Annis' comments on INPUT's EDI software market stratification scheme.

Letters, comments, and product announcements are welcome. We reserve the usual rights to edit for space and clarity.

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EDI EVENTS

February 22-26, Harvey House, Dallas, TX ANSI X12 Committee, hosted by IBM. (703) 548-7005.

February 25, Stouffer Hotel, Nashville, TN. EDI - One on One, focusing on Automotive EDI, Sponsored by Automotive Industry Action Group. (313) 569-6505.

February 25-26, Hyatt Arlington, Arlington, VA. TDCC Training Program. (202) 293-5524.

February 29-March 2, Netherlands Congress Centre, The Hague, Compat '88, the Third International EDI Conference. Eurotech Forum, Brussels (32-2) 736-9715.

March 1, Logan Airport Hilton, Boston, EDI - One on One, focusing on Automotive EDI, Sponsored by Automotive Industry Action Group. (313) 569-6505.

March 3, Hollywood Beach Hilton Hotel, Hollywood Beach, FL. **EDI and X.400, sponsored by the Electronic Mail Association.** INPUT will make a presentation on "EDI and X.400...Is There a Marriage?" (202) 293-7808.

March 3, JFK Marriott, New York, EDI - One on One, Sponsored by Automotive Industry Action Group. (313) 569-6505.

March 15, New Orleans Hilton, Seminar on EDI in the Healthcare Industry, sponsored by the Federation of American Hospitals, Health Industry Manufacturers' and Distributors' Associations. (501) 661-9555.

March 31-April 1, Hyatt Arlington, Arlington, VA. TDCC Training Program. (202) 293-5524.

April 11-15, Washington, DC. Combined UNJEDI Meeting, hosted by the Department of Transportation.

April 13-15, University of Wisconsin-Madison Management Institute, Paperless Purchasing. (608) 262-7357.

April 20-21, Hyatt Regency, San Francisco, CA. ANSI X12 EDI '88 Seminar - Changing the Way Business Is Done, sponsored by the Data Interchange Standards Association (703) 548-7005.

May 2-3, 1988, Netherlands Congress Centre, The Hague, EDI In Practice, sponsored by The City of The Hague, CETIMA, and Elsevier Science Publishers. (+31) 10-436-0371

May 2-3, LeGrand Hotel, Montreal, EDI Council of Canada User Group Committee meeting. (416) 621-7160.

May 16-20, 1988, Chicago, IL. ANSI X12 Committee. (703) 548-7005.

June 1-3, New York Hilton Hotel, International Trade and Computerization Exhibition, sponsored by the National Council on International Trade Documentation (212) 925-1400.

June 15-17, University of Wisconsin-Madison Management Institute, How to Manage Traffic the EDI Paperless Way. (608) 262-4856.

July 28-29, Mark Hopkins Hotel, San Francisco. INPUT's 1988 EDI Conference, featuring INPUT's Market Forecasts, survey results, new and continuing vendor roundtables, industry clearinghouses, user case studies, a cruise around San Francisco Bay, collegiality, food, beverages and more. Preliminary program brochure available in April.

NEXT MONTH:

- **Federal EDI Market Reported**
- **Interchange Systems Inc. — Targeting Banking EDI**

Visit Our Booth at
ANSI X12 EDI '88
April 20-21
Hyatt Regency, San Francisco

AVAILABLE FOR WEDDINGS, BAR MITZVAHS, AND SUPERMARKET OPENINGS

INPUT's Victor S. Wheatman, Manager of the EDI Planning Service, is available for the above events, but more appropriately, for informative executive briefings and as an entertaining and educational conference speaker on the status of EDI today and tomorrow. The tailored slide presentation covers user perspectives, market participants (services and software), vertical market activities, the role of enhanced services, the Bell Operating Companies as market participants, international EDI, and EDI in Western Europe.

For more information, contact our California office.

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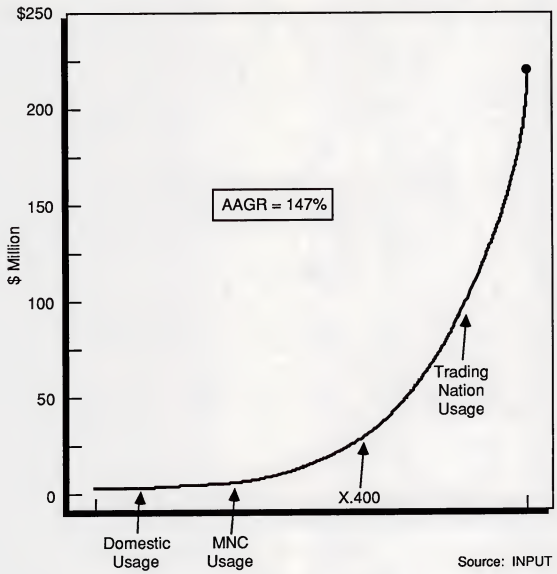
INTERNATIONAL EDI SERVICES* - $219 MILLION BY 1992



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